

MANKIND

OFFICIAL JOURNAL OF THE ANTHROPOLOGICAL SOCIETIES
OF AUSTRALIA

Vol. 5, No. 1

NOVEMBER, 1954

Price: 4s. 6d.

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Published by

THE ANTHROPOLOGICAL SOCIETY OF NEW SOUTH WALES,

C/o. Australian Museum, College St., Sydney,

and

Registered at the G.P.O., Sydney, for transmission by post as a periodical.

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MANKIND

OFFICIAL JOURNAL OF THE ANTHROPOLOGICAL SOCIETIES OF AUSTRALIA

Vol. V, No. 1.

November, 1954

ORIGINAL ARTICLES :

Social Anthropology.

Bell.

Field Techniques in Anthropology. By J. H. Bell, M.A., Teaching Fellow, Department of Anthropology, University of Sydney.

A survey of anthropological literature reveals an overwhelming absence of any remarks on the field techniques used by the authors in collecting their material. In those few cases where field techniques are discussed the discussions are extremely brief and often do not include all the techniques that must have been used by the anthropologists in collecting their material.

The absence of detailed statements of this kind suggests two possibilities : that the anthropological field workers have not considered the techniques used important enough to which to devote space, or that shoddy rather than scientific techniques were used in obtaining the material. Some anthropologists might argue that there is insufficient time when in the field to experiment with techniques, and that within this limited time they must obtain as much information as they can on the society chosen for observation. It is true that the anthropologist's time in the field is limited, but limited time is surely no justification for the field worker to use shoddy or unscientific techniques. By the use of shoddy techniques the anthropologist will receive information, but will it be reliable information? This is the frightening question which must be asked of many anthropological monographs preserved for us to-day.

A detailed statement of the field techniques used by the anthropologist is surely essential for appraisals of both the data presented and the techniques by which the data were gathered. The reader (the theoretician and the student of anthropology) and those making practical use of the anthropologist's material (administrators, missionary bodies, and the like) want to know and should be given the opportunity of knowing just how reliable the presented data are, and this they can often gauge for themselves by a critical examination of the techniques employed in their gathering. In the vast majority of anthropological literature this opportunity is not afforded these people, and they are required to take for granted that the information is reliable and that the techniques employed in its gathering were all above board. In the physical sciences the omission of an explicit statement in the records of research of the techniques used would result in rejection of such records for an independent investigator would not know how to repeat the research. Why should not the same apply in the case of the science of anthropology?

The influence that Malinowski has had on many anthropologists has surprisingly not included his apparent interests in field techniques generally and in recording in some detail

a description of the techniques employed to obtain information on the society studied. In *Argonauts of the Western Pacific* Malinowski's introduction, although open to criticism to-day due to obvious omissions, was a statement on the importance of field techniques in general and of some of the techniques used in his researches in the Trobriands.¹ Anthropologists appear to have been more impressed by Malinowski's call for energetic anthropological research before the existing native cultures disappeared in the contact situation.² Likewise the lead given by Westermarck, one of the earliest anthropological field workers, in his description of some of his techniques used in collecting material for his *Marriage Ceremonies in Morocco*, apparently went unheeded.³

No attempt is being made to suggest that an exhaustive list of possible field techniques can be outlined for use by the anthropologist in the study of any society, for there is no short-cut in field work. Some of the field techniques used in the study of one non-literate people might be inapplicable in the study of another or of the same people at a later stage, say, when the contact situation has developed. For example, the techniques used by Elkin in his investigations of the scattered Kimberley Aborigines and by F. L. S. Bell in his study of the Tanga in their numerically small society on a tiny isolated island would have been totally inadequate for Herskovits in his study of the numerically superior and complex Dahomean society in West Africa. Then again, field techniques in anthropology should be subjected to continual refinement through analysis and experimentation, and new techniques will also be added as new fields of investigation are opened up. Have we not seen an example of this latter point in the use of psychological projective techniques (however inadequate they are at present) in the anthropological culture-personality studies such as Cora du Bois' *The People of Alor* and the numerous I.E.R. (Iradian Education Research) projects by such people as Kluckhohn, Leighton, Thompson, and MacGregor?

Before meeting his non-literate people, the anthropologist usually has no knowledge of what field techniques will prove successful in his study and must, therefore, proceed by trial and error in his search for the most suitable techniques. However, in order to proceed by trial and error he should have as a guide a general knowledge of the techniques that have been found to be successful in obtaining reliable information by other anthropologists in their field work in other areas. Awareness of the problems involved in applying certain techniques will also prove useful.

It would seem that at present anthropologists are using two "groups" of techniques in collecting information in the field: direct (or personal) observation, and the use of informants. The word "groups" is used, for each of the techniques mentioned are simply blanket terms under which many refined techniques are grouped.

The anthropologist, like any other scientist, attempts to observe directly the phenomenon of his study, and generally speaking there should be no disagreement with Nadel's contention that the anthropologist is primarily an observer.⁴ For example, Firth found that most of his data on the Tikopia were gathered through his personal observation rather than through the set interviews that he additionally employed.⁵ For this reason the anthropologist should

¹ Pp. 1-26.

² *Ibid.*, p. xvi of Foreword.

³ Pp. 4-6.

⁴ S. F. Nadel, *The Foundations of Social Anthropology*, p. 35.

⁵ R. Firth, *We, The Tikopia*, p. 5.

attempt to establish himself in a position to observe as much as possible of the life of the community that he is studying. There are several observational techniques that have been used by anthropological field workers in their study of non-literate peoples. These techniques more or less range from "going native" (probably never occurs in its most extreme form), through various levels of participant-observation to pure observation. In some cases the field worker might be able to select his own observational technique, but in the majority of cases the technique will be dictated by the society being studied. This latter point is well illustrated from Evans-Pritchard's field work in Africa among the Nuer and the Azande. The Azande would accept Evans-Pritchard in no role other than a pure observer, while the Nuer demanded a form of participation from him.⁶ Again, the Tikopia demanded from Firth a form of participation in particular ceremonies, for in these specific cases they could not conceive of a pure observer.⁷ This latter example is an especially important one for it illustrates the fact that the field worker does not exclusively employ a particular observational technique throughout his stay in the field. As in Firth's case, the field worker in observing one situation might be a pure observer, whilst in another he must be a participant in the action. This is further seen in the fact that on first entering a non-literate society the anthropologist cannot immediately assume the role of participant-observer on any one of its several levels. His role to begin with must be that of a pure observer, and he will continue to occupy himself in this capacity until the host society is prepared to accept him in some other role, say, as a participant-observer.

The field worker should be aware that his own presence as an observer will have some disturbing effect upon the society being observed. This effect can take many forms such as self-consciousness and shyness on the part of those being observed. Some field workers have noticed that their presence has had these effects upon their subjects, but have maintained that these effects have disappeared after they have been accepted by the societies. This last contention is highly questionable, and an opposing contention worthy of support is that maintaining that the anthropologist will never really be accepted to the degree that the non-literate society will disregard his presence entirely. How can a field worker be disregarded when he is often such a blatant observer and when he is continually directing searching questions at his informants?

Closely associated with the techniques of observation is a methodological problem. This is the problem of the observer's personal equation, for unlike the observer in the physical sphere the field worker does not have any instruments like the microscope and the thermometer for observing facts. The ideal is that the field worker should be an objective observer. It must be stressed that in no branch of social science is complete objectivity on the part of the observer possible. This is not to say that such will always remain the case, but at present it must be recognized that subjectivity does unavoidably creep into the picture. The anthropologist is no exception to this. It is not possible for the field worker to eradicate his biases and values which he has accumulated through his life in his own culture and go into the field as it were with a clean slate. If this could be done field work would not be the difficult task that it is. What is possible, however, is that the field worker can become conscious of many of his values and biases (but certainly not all of them), and this consciousness will

⁶ E. E. Evans-Pritchard, *The Nuer*, p. 15.

⁷ R. Firth, *op. cit.*, p. 11.

enable him, if not to eradicate, then to modify their influence upon his observation. Myrdal has offered some ideas upon this particular point in his monumental sociological work *An American Dilemma*.⁸ The problem of the field worker's personal equation is also intimately related to the recording of his field material, and it is not unusual to find unconscious value judgments occurring in the final presentation of the field worker's results. Other ways of limiting the influence of the personal equation of the field worker have been suggested, but detailed discussion of these must await a later paper.

However, due to certain circumstances the anthropologist is not solely an observer. If he were, it would only be a matter of deciding upon the appropriate observational technique or techniques to be used. For the chemist the phenomenon being observed may be confined to a small test tube, whereas the anthropologist's phenomenon of study, a functioning community, is never so confined even if small both numerically and territorially. No matter how the anthropologist tries (no matter what one or several of the mentioned observational techniques adopted), he can never observe everything happening in the society during his stay, for as he is observing one action he is missing many others. The field worker who claims that in a small society it is possible to observe every facet is simply making a naive overstatement. In addition, there are to be considered such things as infrequent ceremonies and the like which might not take place during the anthropologist's time in the field. So it is that even if the anthropologist spends a year in the field and devotes every waking hour to his task he only sees a comparatively small part of the community's life, and if he is content with what he personally observes, then he will have a very inadequate picture of the society. So far team-work in the field has not proved to be any solution to this problem, for on those few occasions when team-work has been used the team has usually been composed of different specialists (one anthropologist, one psychologist, one archaeologist, one medico, one dietitian, and so on), each interested in his own field with little knowledge of and little interest in the other fields. If a dozen anthropologists were to operate as a team (something not yet attempted) in the study of one society, there would still be innumerable aspects that could not be directly observed. It is for this reason that the additional technique of using informants is so important in anthropological field work.

In spite of the extensive use made of informants in the field, anthropologists in general have shown little awareness of the many problems arising from their employment. In the case of direct, personal observation, the field worker only has to worry about errors he is likely to make himself, but when he uses informants many more avenues of error are opened up. As the field worker cannot avoid using informants for reasons already given, an awareness of the concomitant problems is most essential.

It is here that the problems of informant selection have to be faced. For the anthropologist these problems are real and tangible. The anthropologist needs the most reliable informants that can be obtained, and it tends to be a slow process in discovering the most reliable. Most anthropologists have probably found that the information obtained from one reliable informant is often vastly superior to that obtained from several poor informants. This does not mean that the anthropologist should seek, and having found, a reliable informant use him as his sole informant. Even the reliable informant's material should be checked where

⁸ Appendix 2.

possible with data from other informants, for it may happen that an informant reliable on some topics is quite unreliable on others.

There are many other problems associated with informant-selection that the field worker must be aware of, but a full discussion of such problems must be left to another paper, and brief mention here of only a few of these will have to suffice.

In selecting informants the field worker should always endeavour to obtain eye-witness informants rather than those who can offer only hearsay evidence. The reasons for this, of course, are obvious. When selecting informants the field worker has to take such factors as sex, age and kindred factors into consideration. This is an important point which should be appreciated by field workers, for a field worker could not hope to obtain an accurate picture of female life in any society if he relied solely upon what the male members of the same society offered on the subject. We have a very good illustration of this in the case of the role and status of women among the Australian Aborigines. Male anthropologists who have studied the Aborigines have tended to obtain a somewhat inaccurate picture of the female world because most of their informants have been males. Mention should be made here of the difficulty facing male anthropologists in obtaining information from women in non-literate societies. Catherine Berndt threw new light on the position of women in aboriginal Australia through using female informants themselves.⁹ Another point is that the field worker must be sure that he selects his informants and that they do not "select" him. In other words, the field worker must be wary of those aggressive individuals who for various reasons (e.g., in order to gain prestige in their own society by being associated with the anthropologist, and so on) attempt to force themselves upon him. In societies where for kindred reasons (e.g., a shyness on the part of the people generally) the anthropologist encounters difficulty in obtaining informants, it may be difficult for him to resist the temptation of using those few forward inhabitants who force themselves upon him. Succumbing to such temptation could have the possible drawback of becoming identified in the eyes of the general community with the aggressive and perhaps atypical individual or group.

The use of informants implies interviewing. Just as there are several observational techniques open to the field worker, so there are several interviewing techniques (private, group, informal, formal, controlled, uncontrolled, directive and non-directive and the like) that can be employed to obtain information from informants on aspects of community life not directly observed. Any form of interviewing is fraught with difficulties, and for this reason the anthropologist should familiarize himself with the work on interviewing procedures which has been produced by sociologists who have concerned themselves more with the problem than the anthropologists.

The problems associated with the native language are also many and varied. The success of set private interviews in which confidential and other matters may be discussed depends upon the anthropologist's ability to speak the native language sufficiently well enough so that a third party in the person of an interpreter is not required. The natives naturally prefer to speak their own language, and the field worker should appreciate that they are better able to express themselves and their ideas in their own language than in any *lingua franca* that might be employed. There is the important point that a knowledge of the

⁹ C. H. Berndt, "Women's Changing Ceremonies in Northern Australia," *L'Homme*, 1950

lingua franca might be limited to only a few members of the society, and in this case would be inadequate as a means of verbal communication with the majority of members of the society.

Then there are the problems arising from the payment of informants, such as the problem of coping with the deliberate fabrication of information by informants in order to receive payment; such fabrications could go unchecked in situations in which the information cannot be checked, as in the case of collecting personal dreams upon a particular subject.

Wherever possible, the field worker should attempt to check information received from informants by his own personal observation, for it frequently happens that informants without any deliberateness offer incorrect information in that they tend to give the ideal rather than the actual situations.

A further problem is the recording of the interviews. Should they be recorded in the presence of the informant in the course of the interview or left until the field worker is alone? The picture of the anthropologist for ever with notebook and pencil in hand might not be accepted as far as all peoples are concerned. Sociologists have found that people often refuse to be interviewed if the interviewer insists on making notes on their responses. Anthropologists have found much the same situation existing among some non-literate peoples. Elizabeth Colson,¹⁰ in her field work among the Makah Indians, found that while it was possible for her to take a shorthand *verbatim* record during the actual interview with the majority of adults in the community, the older people who could remember the community life of former days objected to her recording their statements during the interviews. In such cases where recording is objected to by the subjects and has to be made after the interviews, the anthropologist has to be aware of the possibility of the material becoming distorted through faulty memory on his own part.

In this short introductory paper only a few of the many problems associated with anthropological field techniques have been mentioned, and even these have not received adequate attention. Fuller discussion of these and other problems must await future papers. If there is a plea in this paper, it is for conscious recognition on the part of the anthropologist for the importance of scientific field techniques and for an explicit statement by the anthropologist in the final presentation of his material describing the techniques employed in the gathering of his data.

J. H. BELL.

Australia : Archæology.

McCarthy.

Records of the Rock Engravings of the Sydney District, Nos. 41-55. By *Frederick D. McCarthy, Dip.Anthr., Curator of Anthropology, Australian Museum.*¹

These groups are situated at St. Ives, Terrey Hills, Narraweena, Deewhy, Kuring-gai Chase, Patonga and Terrigal. Three of them form the remnants of groups which have been destroyed by quarrying operations and, unfortunately, no record of the lost figures has been

¹⁰ E. Colson, "The Makah Indians," p. viii.

¹ Published by permission of the Board of Trustees.

preserved. The spread of settlement through the Warringah Shire and neighbouring districts has endangered many groups of rock engravings, some of which the Society is striving to have preserved as historical relics.

Group 4I, St. Ives. (Figure 1.)

This group is situated about 100 yards west of the French's Forest General Cemetery, at the end of Haigh Road and at the head of French's Creek. The rock surface is an extensive but broken one forming portion of the creek bed, and below it the gully deepens and the creek flows over a series of small waterfalls from 20 to 50 ft. high. The view from the site is open to the west but is restricted by hills elsewhere. There are three sets of figures at this site.

The thirteen figures at this site comprise (1) a figure which might be a spheroidal-headed club with a twisted handle or a stingray; (2-4) three indeterminate figures; (5-6) two eels, with one and three bars across their bodies; (8-9) two indeterminate figures; (10) a

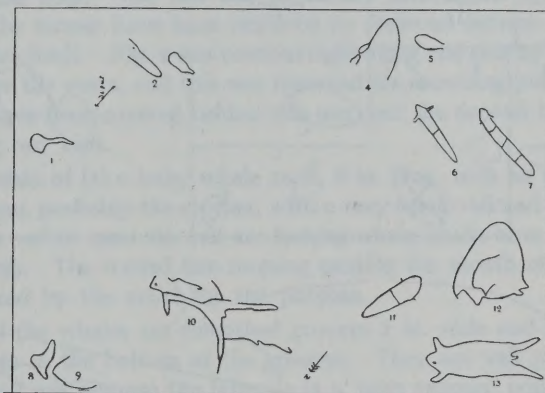


Fig. 1. Group 4I. St. Ives.

wallaby 6 ft. long in leaping posture, with a line attached to his hind leg, another line on his body, the outline of his tail carried across to his neck, and his back incomplete; (11) flathead fish; (12) a curious semi-circular figure of an animal of indeterminate nature, with the lines of another figure within its outline; (13) a short-armed man 5 ft. long, resembling a frog.

Nos. 4, 10-13 are weathered and difficult to discern, and No. 13 has a smooth groove. Nos. 8-9 have smooth well preserved grooves, and Nos. 1-3, 6-7 have well preserved conjoined punctured outlines.

It is worth noting that about half of the figures in this group are not identifiable, and several of them are incomplete. Nos. 4 and 9 might be incomplete fish. Nos. 6 and 7 are of the type commonly regarded as an eel, but No. 10, which is similar but broader in shape, looks more like a flathead. No. 12 might well be identified from its shape as a spiny ant-eater or a sunfish. The group as a whole appears to be a miscellaneous series of casual figures in which fishing and hunting subjects are prominent.

Recorded by P. Slack, September, 1944.

Group 42, Narraweena. (Figure 2A.)

This group, at the time of recording in 1952, was in course of being quarried out. It will be noted that only half of Fig. 10, a kangaroo, remained at the time, and I was informed that among other figures now destroyed there was a whale. The site is beside a truck track which is actually Parr Parade, from Willandra Road to the quarry, and about half a mile from the latter road in Deewhy west. It was prior to the quarrying an extensive sloping rock surface on the northern slope of Beacon Hill, surrounded by low scrub and scattered trees, with an extensive view towards Long Reef ridge to the north.

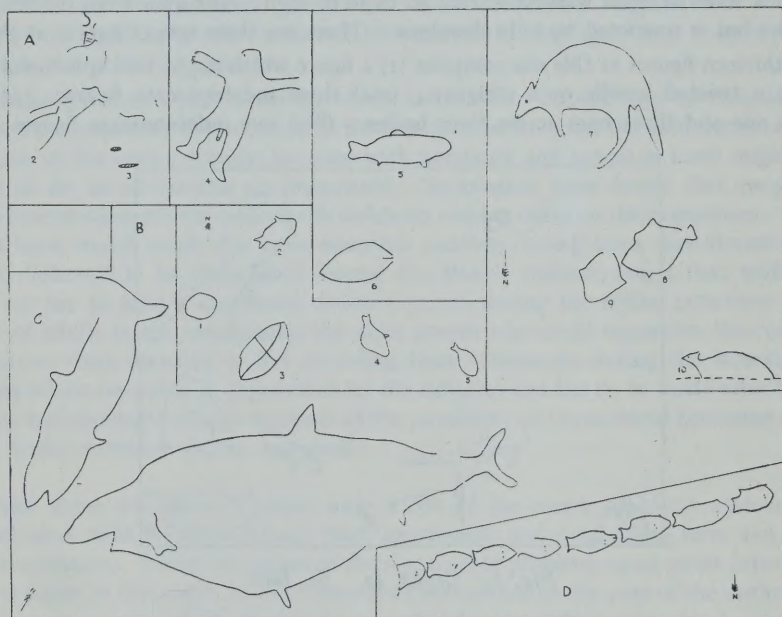


Fig. 2. Group 42 (A) and 43 (B), Narraweena ; Group 46 (D), Terrey Hills ; Group 51 (C), Kuring-gai Chase.

The ten figures are scattered over the large rock surface, and comprise (1) indeterminate lines ; (2) incomplete man with lines near by ; (3) two axe-grinding grooves ; (4) a man 6 ft. high in the usual upraised arms position, with a penis on which a bar suggests circumcision ; (5) fish 2 ft. 6 in. long ; (6) oval figure like a shield or fish ; (7) a splendid kangaroo 6 ft. 6 in. long, in a hopping posture, with a semi-circular back and toes on the forepaws ; (8) a broad fish ; (9) a ray fish ; (10) a kangaroo, mate of the large buck above.

The outlines are of conjoined punctures from $\frac{1}{2}$ to $\frac{3}{4}$ in. wide and from $\frac{1}{8}$ to $\frac{1}{2}$ in. deep. Nos. 1-4 are indistinct and weathered. During a visit in August, 1954, it was noted that Figs. 8-10 have now been quarried out, and Figs. 1-3 in fenced-off allotments, on which houses are being built by the Housing Commission. The group will thus be completely destroyed, but it is hoped to have Fig. 7, the large kangaroo, cut out and preserved.

Whether there is any relationship between these scattered figures cannot be decided, but the two men, two kangaroos and three or four fish illustrate hunting and fishing themes common among the engravings.

Recorded by the author, July, 1952.

Group 43, Narraweena. (Figure 2B.)

This group is situated beside South Creek (which flows into Narrabeen Lagoon) at a point 50 yards from Willandra Road and 120 yards from the western end of Parr Parade. It forms part of the same ledge of rock, running along the northern slope of Beacon Hill, on which group 42 is located. The rock surface forms the bed of the creek at this point, and it is uneven and rough. The figures are engraved near the northern edge of the rock, where the water falls to a lower level about 20 ft. below. There is a long rock-shelter underneath, but it was occupied by the Aborigines at the most only intermittently, there being no occupational deposit on the floor. The site was previously surrounded by big trees and thick undergrowth, but the former have been removed by firewood cutters. The view was thus restricted to the creek itself. Fig. 2 was covered right along one side by soil and undergrowth washed on to it over the years, and this was removed for recording purposes. It is possible that other figures have been covered behind this one, but the deposit is thick and could not be removed during our visit.

The group consists of (1) a baby whale 10 ft. 6 in. long, with an unfinished tail; (2) a whale 21 ft. 6 in. long, probably the mother, with a very small tail and broad body, in which two portions of the outline near the tail are lacking where spalls have broken off the rock; (3) an unfinished fish. The dotted line forming part of the mouth of the large whale is a natural crack utilized by the artist for the purpose.

The outlines of the whales are smoothed grooves 1 in. wide and up to $\frac{3}{8}$ in. deep, but punctures are visible in the bottom of the grooves. They are well preserved, the big one better than the small one because the latter is in a more exposed position. The outline of the fish is of conjoined punctures $\frac{1}{2}$ in. wide and $\frac{1}{8}$ in. deep, and it is evidently a later addition to the group.

Recorded by the author, August, 1954.

Group 44, Long Reef Ridge. (Plate A, Figure 3.)

The nine sites described in this series are all situated on the ridge which extends westward from Long Reef to South or Wheeler's Creek, flowing into the southern shore of Narrabeen Lagoon. The carvings are between Pittwater Road and South Creek, some of them being in Deewhy and others in Collaroy. Some of them were reported to me many years ago by the late W. J. Walton, and others by Mr. D. Hellmrich, and the latter kindly assisted me with the recording in 1945.

Series I (Plate III, Fig. A). Situated on a flat ferruginous slab of sandstone, with a rough and pitted surface, 70 yards south of the junction of Henley Avenue and Anzac Parade, Collaroy. This rock is near the southern rim of the head of a gully that runs down to Collaroy Beach. The view is an extensive one to the south and east. The group consists of a snake 7 ft. 3 in. long, one end of which is cut off by a shallow oval hole. Beside the snake is a

large indeterminate figure now impossible to trace accurately. The outlines are of conjoined punctures, $\frac{1}{2}$ in. wide and $\frac{1}{4}$ in. deep, most of which are oval in shape.

Series II (Plate III, Fig. C). On a small convex rock, with a soft surface, close to the edge of the head of the above gully, 70 yards from Anzac Parade, is an interesting group of five fish, three of the broad bream type, one like a catfish, and the other indeterminate. They are from 1 ft. 3 in. to 3 ft. 3 in. long. The two on the left have narrow sharply cut outlines of conjoined punctures $\frac{1}{2}$ in. wide and $\frac{3}{16}$ in. deep, the catfish has a faint weathered outline almost 1 in. wide, but those of the two broad fish are clear and well preserved, some of the punctures overlapping and others are separated.

The unusual range of species of fish includes some of those serving as totems or caught for food.

Series III (not recorded). Situated on a large, flat and hard ferruginous slab of sandstone beside a path at the top of the ridge, south of series II. The engraving is of a large fish, like a groper, 4 ft. 6 in. long, part of which has been destroyed by a trench cut into the rock, and there is also an unfinished oval figure. Both have conjoined punctured outlines, weathered but fairly well preserved.

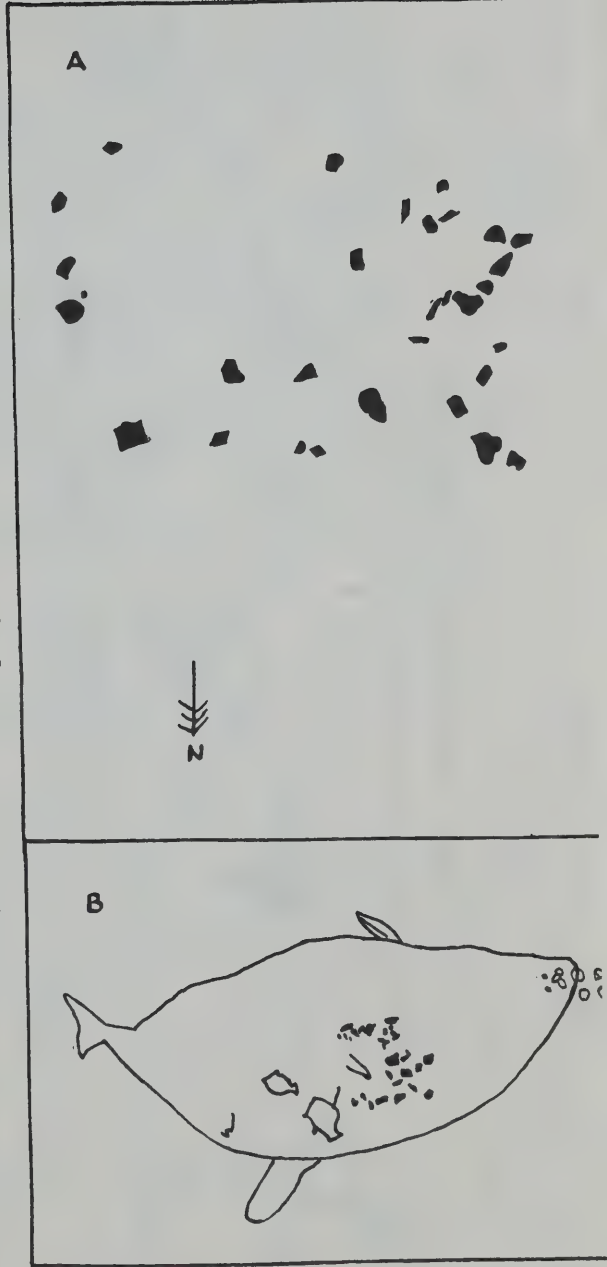
Series IV (Plate III, Fig. D). Situated to the west of series III, and 100 ft. east of the Plateau Road. The rock is flat, with a slope to the south, and the two fish are engraved on opposite sides and 13 ft. apart. Both are well preserved and of the eel type, although one may be a flathead. A third figure has been cut out of the rock about 6 ft. east of the fish on the left. The puncturing technique is well illustrated in the fish on the right. The pits are both circular and oval, the latter being $\frac{1}{2}$ in. by $\frac{1}{4}$ in. in size, with a sharp face at one end where the blow stopped. Some of these pits are separate and others are conjoined.

Series V (Plate III, Fig. B). Situated on Lot 9, 100 yards south of Parkes Road, on a group of rock surfaces which slope to the south. Most of this group has been quarried away and its composition as a whole is unknown. When recorded, only the tail of a shark or whale, and the body of a large fish, remained on the principal rock. Thirty feet south is a fine fish 3 ft. 4 in. long, running north and south, on another rock. At the western end of the group is a series of ten axe-grinding grooves on a convex tongue of the rock. The outlines of the carvings consist of conjoined punctures $\frac{1}{2}$ in. wide and $\frac{1}{8}$ in. deep, that of the complete fish being sharp and well preserved, but the other two figures are smoothed by weathering.

Series VI (Plate III, Fig. F). Situated on a prominent ledge of rock, running from east to west parallel to and 300 yards north of Parkes Road, where there occurs a number of separate rocks, with a face up to 10 ft. high on the southern side. The engravings are placed on two of them which are close together. The figures are disposed along the northern edge of the rocks. There is an extensive view to the south across the Deewhy valley and lagoon.

From the western end, the series consists of (1) an indeterminate figure, part of which might be a human foot-track or mundoe; (2) an elongate slightly crescentic figure; (3) four mundoes, two of which have a short straight groove in the middle; (4-6) mundoes; (7) a wading bird like a heron; (8-10) three circles.

All of the outlines have been rubbed smooth, and are from 1 in. to 2 in. wide, those of the circles being the widest. The outlines are all weathered and shallow.



[14]

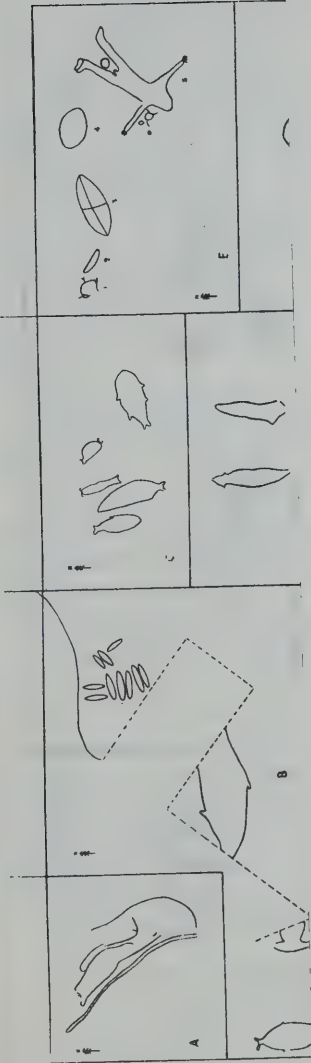




Fig. 6. Group 54, Warrah Sanctuary.

The track of mundoes leads to the bird and the circles, which might in this group represent waterholes. No. 3 might be a sword-club or boomerang used to kill the bird.

Series VII (not recorded). Situated on a large undulating expanse of rock on top of the ridge, about halfway between the Pittwater Road and South Creek. The line of human mundoes crosses the middle of the rock from east to west.

Series VIII (Plate III, Fig. E). Situated on a flat rock about a furlong east of South Creek, beside a track which joins the end of Parkes Road. The unusually but charmingly situated site is in open forest at the bottom of the ridge. Portion of the rock has been quarried away, but the figures are undamaged. The view is restricted by the forest.

The group consists of (1) a doubtful and indeterminate outline which may be natural, another one of a different design occurring beside the shield; (2) elongate oval figure like a bullroarer; (3) a broad heliman shield, with cross-line decoration; (4) an oval, probably another shield; (5) a man, 4 ft. 7 in. high, in the usual position. He is standing on some object, has a circle between his legs and three more beside his head. The fingers are shown on both hands. A deep crack runs from the heel of his left foot to his groin and through the circle.

The outlines consist of conjoined punctures $\frac{1}{2}$ in. wide and $\frac{3}{16}$ in. deep, well preserved.

There is probably a mythological significance for this group, and the meaning of the small circles is unknown.

Series IX (not recorded). Three human mundoes on a rock in the bed of South Creek, beside a footbridge, about half a mile north of series VIII. They are covered at high tide.

Remarks. It is probable that groups 1-5 are casual series of no special significance; Nos. 6 and 8 might have been sacred in meaning and function, and Nos. 7 and 9 probably formed part of a sacred track connected with historical and initiation ceremonies.

Recorded by the author, 1945.

Group 45, Powder Works Valley. (Plate A, Fig. 4F.)

Situated near the Powderworks Road, at a point 209 paces from its northern side, near Trig. Stn. 644, at the head of the valley. The rock forms the top of a cliff. The figures comprise a leaping kangaroo, 4 ft. long, posed in the lengthened-out position assumed just before landing from a leap; a large emu 10 ft. 3 in. long in a stiff profile posture; and two small birds, one of which may be a young emu. The outlines are of conjoined punctures. The series is a hunter's record of game in the vicinity.

Recorded by C. Greenwell, 1946.

Group 46, Terrey Hills. (Plate A, Fig. 4.)

The seven sites recorded in this series were shown to me by Mr. E. H. Mercer, whose recordings of some of them were checked, and who assisted me in recording the others.

Series I (Plate II, Fig. D). On one of a large group of rock surfaces beside the eastern side of West Head Road, half a mile from its junction with the Mona Vale Road, is engraved from west to east a line of eight fish, of the broad bream type swimming head to tail. Their outlines are of conjoined punctures up to 1 in. wide and from $\frac{1}{8}$ to $\frac{3}{16}$ in. deep. The three at the eastern end are the best preserved. An interesting feature of the series is that the

artist did not finish the one at the western end, simply engraving it as far as the edge of the soil, which is shallow, and did not bother to remove it to complete the figure. There is an extensive view to the north, east and south over a series of ridges and gorges, but in the south-west the top of a hill obscures the view.

Series II (Plate A, Fig. 4B). A goanna 2 ft. 9 in. long carved beside a series of rapids in the western branch of McCarr's Creek, about 100 yards from a rough road from Terrey Hills to the Duck Holes. The outlines are of conjoined punctures $\frac{1}{2}$ in. wide and $\frac{3}{16}$ in. deep, well preserved.

Series III (Plate A, Fig. 4G). A series of extensive flat rocks outcrop along the track from Terrey Hills to the Duck Holes, down the western branch of McCarr's Creek. They are on the top of a low ridge, with a broad valley on the eastern side. It is surprising to find only two figures on such extensive rock surfaces, but this is not an infrequent occurrence in the Sydney-Hawkesbury district. No. 1 is a fine culture-hero of the Daramulan type, almost 10 ft. high, with one human leg, emu-like body, one arm bearing very long fingers, and a long head with chin and neck but no eyes. He is in profile and the pose is well depicted. The outline is of conjoined punctures up to 1 in. wide and from $\frac{1}{4}$ to $\frac{1}{2}$ in. deep, very well preserved. To the north-east, about 100 yards away, on a sloping portion of the rock, is (2) a well posed leaping kangaroo 8 ft. 6 in. long, with no toes, one eye, and a flat-faced head. Its outlines are smoothed by weathering, and are 1 in. wide and $\frac{1}{8}$ in. deep, the figure being of a different age to and probably older than No. 1.

Series IV (Plate A, Fig. 4C). South-east of series III, in the bed of the creek forming the western arm of McCarr's Creek, and one-quarter of a mile east of the site beside Mona Vale Road illustrated by Campbell (1899) in Plate VIII, Fig. 1, is a pothole 6 ft. long and 1 ft. 6 in. deep, with another one 5 ft. above it. Engraved between them is a delightful school of six fish swimming into the smaller pothole. They are school fish, probably mullet. Below them is the side of another fish. The largest figure on the rock is that of a pregnant woman. Portion of one side of her head is now almost indiscernible. There are seven axe-grinding grooves beside one of the potholes. The outlines of all of these carvings consist of weathered conjoined punctures $\frac{1}{2}$ in. wide and $\frac{1}{8}$ in. deep.

The woman, with her turned-in feet, broad genital organ, and fat body, appears at first sight as though she is pregnant and is about to give birth to a child, her pose being one suggesting strain. On the other hand, this figure may represent a man, because no breasts are indicated. The site is one at which natives, in between grinding axe blades, have engraved a fishing composition.

Series V (Plate A, Fig. 4A). The figures in this series were not recorded by Campbell (1899, Plate VIII, Fig. 1), who recorded a huge whale 42 ft. long, a man with a club, and a half wallaby on a large rock beside Mona Vale Road. The additional figures, all incomplete, comprise (1-2) two indeterminate objects; (3) a small man; and (4) a larger man 5 ft. high. The latter is at the head of the whale, and he has a horizontal bar just above his penis. As No. 4 is only a foot away from the whale, it is probable that Campbell disregarded this and Nos. 1-3 because of their weathered and faint state of preservation. They appear to represent an earlier series than Campbell's.

Series VI (Plate A, Fig. 4H). This is a flat but sloping rock, with a steep high face on one side, situated on the northern and lower side of a saddle. It is near the end of a spur

which runs east from the Pittwater Road, at a point $1\frac{1}{4}$ miles from French's Forest Road, near a flagstone quarry. From the site is to be seen an open view into part of the Deep Creek gorge. The figures comprise (1-3) three broad shields, with similar line-cross decoration, from 4 ft. 4 in. to 5 ft. 6 in. long, one of which shows a correction by the carver in the shape at one end. Twenty feet above them is a (4) wallaby or kangaroo, 5 ft. long, with the toes shown on the hind leg, beside which is a (5) large hunting boomerang, 3 ft. long. The outlines of these figures are all of conjoined punctures, $\frac{1}{2}$ in. wide and $\frac{3}{16}$ in. deep. They are sharp and fresh, and are not weathered to the same colour as the rock surface itself, as is usually the case in the Sydney-Hawkesbury district. This group obviously depicts a hunt.

Series VII (Plate A, Fig. 4D). Further out, on the end of the above spur, in the middle of one of a number of large rock surfaces which command a magnificent view down the Deep Creek gorge, is a human figure, probably a man, with his head defined as an oval, two slit eyes, and no hands. The bottoms of his feet have weathered away. His outline is of conjoined punctures $\frac{1}{2}$ in. wide and $\frac{3}{16}$ in. deep, very well preserved in hard ferruginous sandstone.

One hundred feet away, on the western edge and northern end of another large rock, is the engraving of a beautiful little rock wallaby 2 ft. 6 in. long with outlines similar to that of the man.

Recorded by the author and E. H. Mercer, November, 1946.

KURING-GAI CHASE NATIONAL PARK.

Group 47, McCarr's Trig. Station. (Plate C.)

This scattered group is situated on an outcrop of tessellated rocks which cover an area of an acre or so, various surfaces of rock bearing engravings being divided by growths of grass and low vegetation. The outcrop occupies the top of a low hill half a mile to the north of McCarr's Trig. Station, and is beside the eastern side of West Head Road, at a point half a mile from the Coal and Candle Creek road. Most of the rock surfaces are broken up into rectangular and related units by cracks and fissures cutting one another at about right angles, but in some parts the long cracks, which run north and south, divide the rock into long narrow slabs. Weathered holes five or six inches in diameter and an inch or two deep occur singly in the middle of a tessellation, giving rise to an impression that they were made by the Aborigines. Occasionally more than one occurs in a tessellation. In some places they occur in belts, particularly where water runs over the rock in and after wet weather. According to geological opinion, the cracking of the rock to form these tessellations was caused by shrinkage as the sediments dried and hardened into sandstone. The pits are apparently a local form of weathering. The latter occur in large numbers at the Allambie Road site (Campbell, 1899, pp. 20-21, Pl. 7) and in other localities.

The view from the tessellated rocks is hemmed in to a degree by the higher ridges nearby, but from their western side may be seen the gorge of Coal and Candle Creek, and from the eastern side an extensive panorama over the southern end of Pittwater. From the south-western side of the outcrop the ground slopes down to a marshy area, in which, about a quarter of a mile away, there is another group of engravings (McCarthy, 1941, pp. 49-50. Pl. M).

Subjects. The 53 figures are described from the west to the east in six series, as follow :

Series I (Plate C, Fig. 7A). Along the flat south-western edge of the outcrop, in a soft textured sandstone, occurs a compact group of figures and a number of other carvings are

scattered over the rock up to 50 ft. away. They consist of (1) three shields, with crossed line decoration, in a set from 4 ft. to 4 ft. 3 in. long; (2) a similar shield; (3) 50 ft. from Fig. 1 is a man just over 3 ft. high, in a stepping posture, with his hands held above his head; (4-5) 25 ft. from Fig. 2 are two open-ended figures, probably incomplete; (6) a koala bear, in profile, just under 4 ft. high, with fingers and toes. Thirty-two feet from Fig. 2, in a separate set, are (7) a ground bird 2 ft. long; (8-9) these are difficult to identify, but are probably three jelly-fish; (10) a fish; and (11) a small flying bird. Twenty-five feet away is another separate and compact set comprising (12) a flying bird 3 ft. long, on which one wing has been restricted in size by the artist beginning the figure too close to the edge of the rock; (13) goanna; (14) boomerang; (15) two fish swimming head to tail; (16) six small and large fish at various angles to one another and apparently of several different species; (17) a large fish about 6 ft. 6 in. long; (18) a fish; (19) a shield almost 5 ft. long; (20) indeterminate, possibly a shield.

The whole of this series has conjoined-puncture outlines $\frac{1}{2}$ in. wide and from $\frac{1}{8}$ in. to $\frac{3}{16}$ in. deep, mostly well preserved but in some figures smoothed by weathering. In portions of some outlines the punctures are separated from one another.

Series II (Plate C, Fig. 7B). On a large rock surface in the north-western corner of the outcrop, separated from the remainder by a narrow crevice, is a goanna 3 ft. long, with an outline of conjoined punctures $\frac{1}{2}$ in. wide and $\frac{3}{16}$ in. deep.

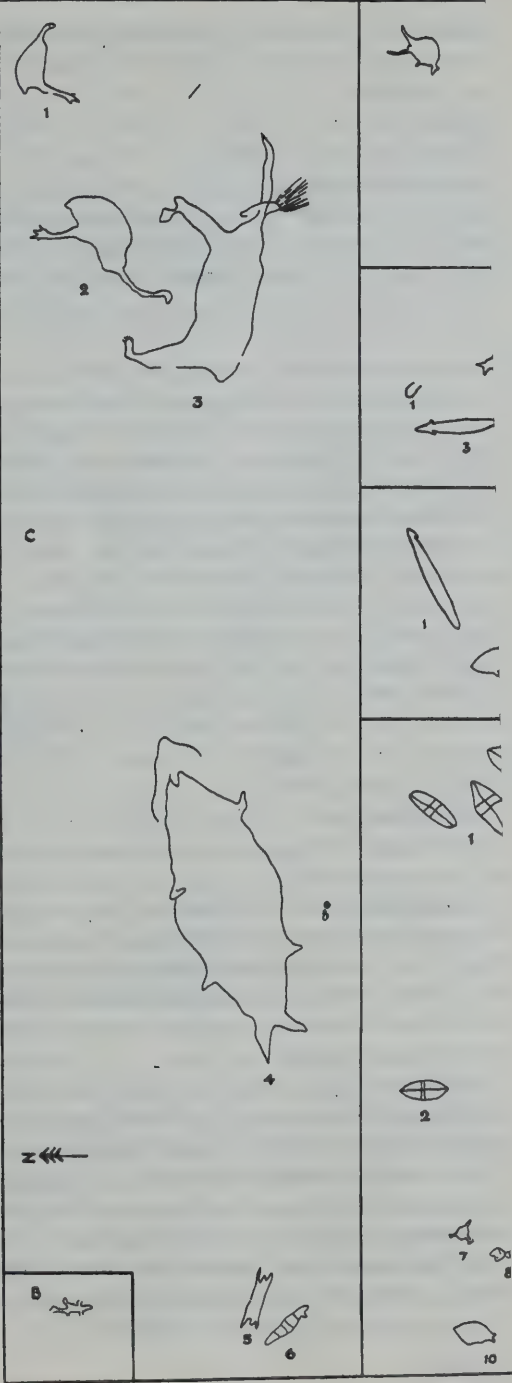
Series III (Plate C, Fig. 7C). This, the most important series in the group, is situated on the northern end of the same rock surface as series I, being approximately 130 ft. north of Fig. 1 in the latter series. The rock surface here is not tessellated but is a large comparatively flat area suitable for the big figures engraved on it, which comprise (1-2) two emus, almost 5 ft. and 11 ft. long, which appear to be a well proportioned female and a young bird, the latter peering at the ground as though looking for food, the former with its head up in an alert position; (3) an extraordinary and unique spiritual ancestor figure 19 ft. long, with a human foot on the hind leg, a bag (of magical quartz crystals) held or suspended from the fore-limb, and a long neck with a head, decorated with a rayed head-dress, superimposed at a later date to the completion of the main figure; the figure is an emu-like one with the single hind leg, wing, and long neck with pointed head; (4) a whale 25 ft. long, with four fins; the second outline of a head probably represents a second whale swimming behind but slightly in front of the fully portrayed one; (5) a small man or flying phalanger almost 5 ft. long; (6) a barred fish of the eel type.

Technique. Figs. 1-3, the two emus and the spiritual ancestor, and Fig. 4, the whale, have outlines smoothed by rubbing up to $1\frac{1}{4}$ in. wide and $\frac{3}{8}$ in. deep.

Series IV (Plate C, Fig. 7D). On two small rocks approximately 40 ft. and 80 ft. north of series III are three wallabies, all in typical leaping poses. Their outlines are of conjoined punctures $\frac{1}{2}$ in. wide..

Series V (Plate C, Fig. 7E). A long and flat rock surface bearing series V is separated by a narrow strip of low vegetation from the one on which series II-III are engraved. Series V is on the western side of this rock, and the figures are widely separated along its comparatively narrow surface, as follows: (1) an eel 8 ft. 6 in. long; (2) an indeterminate figure resembling a barbed spear head or a fish; (3) a fish; 60 ft. southward is a man almost 5 ft. high with his hair shown, and also two separate pits outside his head; 60 ft. further southward are

ROCK ENGRAVINGS OF THE SYDNEY DISTRICT.



three more figures, comprising (5) indeterminate ; (6) a shield ; (7) a puzzling figure which might be a tortoise or turtle : it has been spoken of as representing a platypus, but the plates shown on the side make this identification improbable.

The outlines are all of conjoined punctures $\frac{1}{2}$ in. wide and $\frac{1}{8}$ - $\frac{3}{16}$ in. deep. The figures are reasonably well preserved, but the man is best seen in a morning or afternoon light.

Series VI (Plate C, Fig. 7F). Situated on another large rock surface on the eastern side of the outcrop, in the middle of the rock beside a growth of low vegetation about 50 ft. from series V. They comprise (1) U-shaped figure ; (2) a fish which has been speared ; (3) an eel ; (4-5) two fish ; (6) portion of a large incomplete fish ; (7) a small oval-like human mundoe ; (8) a puzzling figure which might represent a cross, a two-legged goanna or a flying bird ; it is 50 ft. from Fig. 6.

Stone Heaps. Two series of round and oval aggregations of small pieces of ferruginous sandstone occur between series I and III, on a sloping area of rock down which water runs during and after wet weather. The heaps are from 30 to 48 in. in diameter or length, and about 6 in. thick at the highest point. One set of six heaps is in the form of an irregular circle, the other has four heaps in the form of a crescent, with the other two at right angles on each side of the middle of the crescent. Whether these were arranged by the Aborigines cannot be decided, but the symmetrical arrangement supports this suggestion. They have not been formed by water rolling the stones together, because if the action of the water had been strong enough to do this it would have washed the stones right down the slope on this part of the rock. Loose and irregular aggregations of these stones occur elsewhere on this rock surface, but not in similar heaps. Cairns of stones in a line occur on a large rock bearing engravings at Somersby, but these are of larger blocks and the heaps. Occasional heaps have been recorded with other groups. It was also the practice of the Aborigines in New South Wales to build heaps of soil on which the ceremonial leaders and medicine-men stood during part of the *Bora* initiation rites.

Remarks. The presence of the large spiritual ancestor in a composite human and emu form indicates that this site is a ritual one at which both historical and totemic rites were carried out, the former to re-enact episodes from the mythology of the local clan, the latter for the increase of some of the species of animals engraved at the site. This group, also, cannot be regarded as an entity in itself. There are many other groups of engravings between McCarr's Trig. and Topham Trig. stations along this peninsula, which juts into Broken Bay and forms the western shore of Pittwater. In some of these groups, notably near Topham Trig. (McCarthy, MANKIND, III), large and important spiritual ancestors also occur, and I would regard the whole area as part of one ceremonial complex or track.

It is probable that the emu-like spiritual ancestor forms a ritual unit with the two emus and the whale in particular, the balance of the figures being of a casual nature not of much importance in the ritual but representing totems of individuals who visited the site (and also of their wives) for ceremonial purposes. The shields may represent their owners, particularly the three in a set in series I. In the latter series also, Figs. 12-20 could quite easily represent a favourite and productive fishing spot, the composition illustrating the various species of fish frequenting the place, a flying bird, a goanna seen nearby, and the shield and boomerang of the artist. Fig. 3 in series I and Fig. 4 in series II present two strangely contrasting portrayals of the human figure.

Recorded by the author, with Miss E. Bramell, Messrs. F. L. S. Bell, H. Cocks, W. H. P. Kinsella and E. H. Wright, in 1941. The group was shown to the author by Mr. W. E. Holden, O.B.E., a Trustee of the Chase.

Group 48, Arden Trig. Station. (Figure 8.)

Another scattered series of figures situated on a crescentic ledge of rock which extends for about a quarter of a mile to the east of West Head Road, and joins a number of flat surfaces of rock on the western side of the road. The ledge has a sloping face towards the north at the head of a long valley through which a creek flows into Lovett's Bay, Pittwater. The

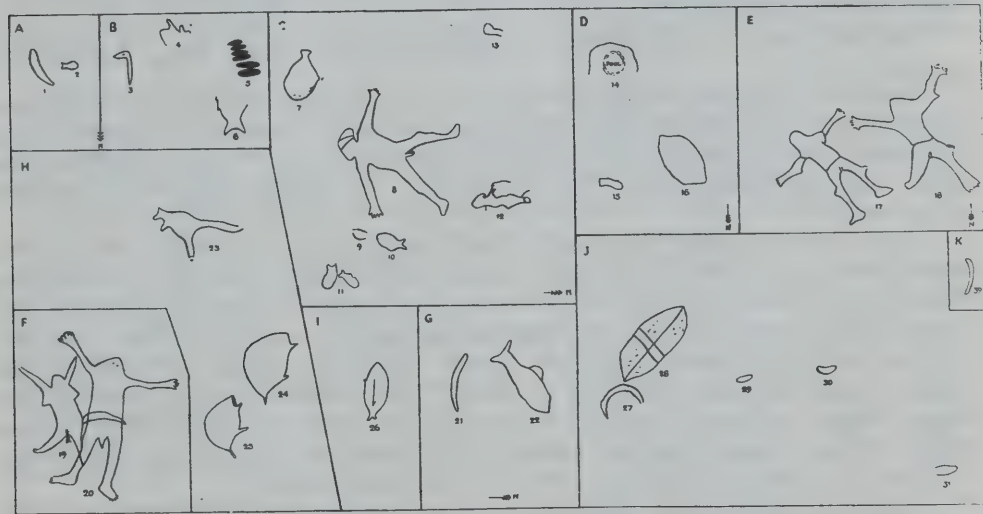


Fig. 8. Group 48, Kuring-gai Chase.

creek rises in a marshy slope across which the rock ledge runs, and the area generally is one that would have offered good hunting in Aboriginal times. The rocks on the western side of the road are at the head of a wide, flat-bottomed valley which leads towards Coal and Candle Creek, and the whole outcrop leads due east from Arden Trig. Station. The view from various parts of the site is extensive, looking out over the surrounding hills and part of Pittwater.

Campbell (1918, Pl. XIX, Figs. 9 and 11, p. 61) recorded what he apparently selected as the most interesting figures at this site and ignored the remainder. I have incorporated Campbell's figures in my recording, and for convenience, owing to the distances between the various sets of figures, will describe them in eleven series, as follow, beginning from the eastern end.

Series I (Figure 8A). Figs. (1), a sword club 1 ft. 9 in. long, and (2) a small fish, are engraved on a part of the rock at the edge of the marsh, water seeping over them continually.

Series II (Figure 8B). On an undulating section of rock, 30 ft. west of series I, are (3) a phacoid-headed club with a large natural pit in the centre of the head, like an eye.

the first record of this type of club in the Sydney district ; (4) unfinished mammal, probably a spiny ant-eater ; (5) six axe-grinding grooves ; (6) posterior end of a large fish. Fig. 3 is 14 ft. from Fig. 4.

Series III (Figure 8C). On a flat but very wet part of the rock-ledge, portion of the surface of which has spalled away beside Figs. (8-11). This series is 60 ft. west of series II, and consists of (7) a broad fish ; (8) a man 5 ft. 3 in. high, with his hair coiled and bound, well defined fingers on his hands, a median stripe on his penis, and his left leg with an irregular outline suggesting " boomerang-leg " : he is posed as though expecting something to happen to his right, in which direction he is looking ; (9-11) four small fish ; (12) a fish-like object 2 ft. 7 in. long, with lines attached to its sides ; (13) an unfinished figure which could be a club or the foot of a man.

Campbell (1899, Pl. XIX) shows a human hand in Fig. 12, and Fig. 7 is incorrectly recorded by him.

Series IV (Figure 8D). Another 60 ft. west of series III, on a steeply curved face of the ledge, are (14) a pothole which holds water in wet weather, with a line engraved around three sides, as with a pothole near Topham Trig. (McCarthy, 1941, Pl. 2, Fig. 1) and on Flat Rocks ridge, Hawkesbury River ; (15) a small fish ; (16) a shield lacking the crossed line decoration.

Series V (Figure 8E). One chain further westward, at the top edge of a large flat but slightly sloping portion of the ledge, and 150 ft. from West Head road, are (17-18) an unusual pair of human figures, 5 ft. to 5 ft. 6 in. high, both wearing girdles, one has arm-bands, their knees and elbows are unusually well marked, and only one of their feet bears toes, although fingers are shown on all of the hands. No eyes are shown. The penis on both figures is pointing upwards as though in erection, and although at first sight their genitals suggest women, attention is drawn to the fact that they have no breasts. While the pose of Fig. (17) is a normal one for men among the engravings, that of Fig. (18) is animated and he appears to have one leg raised as though running or dancing.

Series VI (Figure 8F). Sixty feet from the western side of West Head Road, at the eastern end of a large flat rock surface, are (19-20) another pair of human figures, unmistakably a man and his wife, offering a marked contrast in size, the man being 6 ft. and the woman 4 ft. high ; the man has toes and fingers, and a sword-club across his waist, but his wife has neither toes nor fingers and is wearing a pubic apron, and both have a pair of eyes. Their pose is again an animated one, as though in alarm at the sight of an enemy or of the presence of an evil spirit or omen.

Series VII (Figure 8G). One hundred feet north-west of series VI, on a flat rock, are (21) a sword-club, beautifully preserved, 2 ft. 6 in. long, and 30 ft. away (22) a poorly shaped fish, with a large dorsal fin, 3 ft. 10 in. long.

Series VIII (Figure 8H). In the middle of another large rock 150 ft. south-west of series VI are (23) a fine wallaby 4 ft. long with flowing lines, its leg truncated abruptly, beside a small natural pit ; (24-25) 30 ft. away, a pair of spiny ant-eaters, very well preserved, moving in file, near the north-eastern edge of the rock.

Series IX (Figure 8I). On the western side of a flat rock 100 ft. south-west of series VIII is (26) a fine fish of the bream type with a hook inside its body.

Series X (Figure 8J). On another flat rock, 100 ft. south-west of series VIII, divided by joint lines, is a well preserved set of figures which consist of (27) a deeply curved

returning boomerang ; (28) a shield, 4 ft. long, decorated with cross lines and dots (which were usually painted in red on a white surface) ; (29-30) two human mundoes, the first one being 18 ft. from the shield and the second one 4 ft. further away ; (31) an open-ended oval figure, probably another human mudo.

Series XI (Figure 8K). A boomerang (32) engraved on an isolated rock north-west of series X.

Technique. Most of the outlines are of conjoined punctures $\frac{1}{2}$ in. wide and from $\frac{1}{8}$ – $\frac{3}{16}$ in. deep, some of them being smoothed by the seeping water running across them. Figs. 1-2, and some in series II, III and VIII, are up to $1\frac{1}{4}$ in. wide. Fig. 14, the groove around the pothole, is 2 in. wide and $\frac{1}{2}$ in. deep, as though intended to prevent water running into the hole. Series X has outlines from $\frac{3}{4}$ to 1 in. wide and from $\frac{3}{16}$ to $\frac{1}{4}$ in. deep, and is a fine example of the conjoined puncture technique.

Remarks. The single and small sets of figures, spread out over a distance of one-third of a mile, are apparently disconnected, each one representing a separate fishing, hunting or other incident in the life of the Aborigines. Series I-IV, VII and IX depict fishing, series VIII has a hunting theme, while series V and VI portray the Aborigines themselves. Series I, II and VII are somewhat similar, and repeat the same idea of a club or boomerang associated with a fish, at which the weapon was probably thrown. In series III a man is shown with his fish totem, or the fish he has caught or hopes to catch, and there was probably a legend explaining the incident. The fish (Fig. 26) has obviously been speared with a single-barbed spear or caught on a hook. The two men in series V appear to be engaged in dancing or a similar energetic activity ; their knees and elbows are unusually well marked, and their penises are in erection. The man and woman in series VI may represent an eloping couple, a woman seduced by the man, a man and wife who live in the vicinity, or figures from the mythology. The deep groove around the pool, apparently to prevent water flowing into it, is an unusual feature of the series. Series X has three possible explanations : (1) a man has left his shield and spear and gone away, (2) they represent the granting of the use of these weapons to an initiate who is led to them along the sacred track of mundoes, or (3) they are the weapons and track of a spiritual ancestor.

Recorded by the author, July, 1946.

Group 49, West Head Road. (Figure 9.)

This group is engraved in a prominent outcrop of large rock surfaces at the top of the fill leading upwards from Salvation Creek along the West Head Road. It is one-quarter of a mile north of the creek, and 100 yds. from the western side of the road. From these rocks is to be seen an extensive view to the south and east, and especially of Horseshoe Bay, Newport. The site is half a mile due south of Willunga Trig. Station.

Series I (Figure 9A). On a large rock on the eastern side of the outcrop, and sloping to the east, is (1) a whale 30 ft. 6 in. long, with the head, 7 ft. long, of a second whale adjoining the first one's head. A remarkable feature of the depiction is that the two heads are turned in opposite directions. The eyes are shown on both heads, there are three fins on one and two on the other whale. Ten feet to the north is (2) a well done man 5 ft. 6 in. high, with pronounced elbows and knees, wearing a girdle and arm-band, but with no eyes : (3-4) a circle, probably representing a waterhole, with a bird beside it.

Series II (Figure 9B). On the sloping edge of a very extensive adjoining rock surface is a large shield, 120 ft. west of the whales. It is 5 ft. long, and like many shields elsewhere among the engravings is a beautiful example of the puncturing technique. About 15 ft. west of it are several lines of an indeterminate figure now almost weathered away.

Remarks. The most probable interpretation of these two series is that they represent a medicine-man carrying out magical rites to entice the whales into shallow water, where they

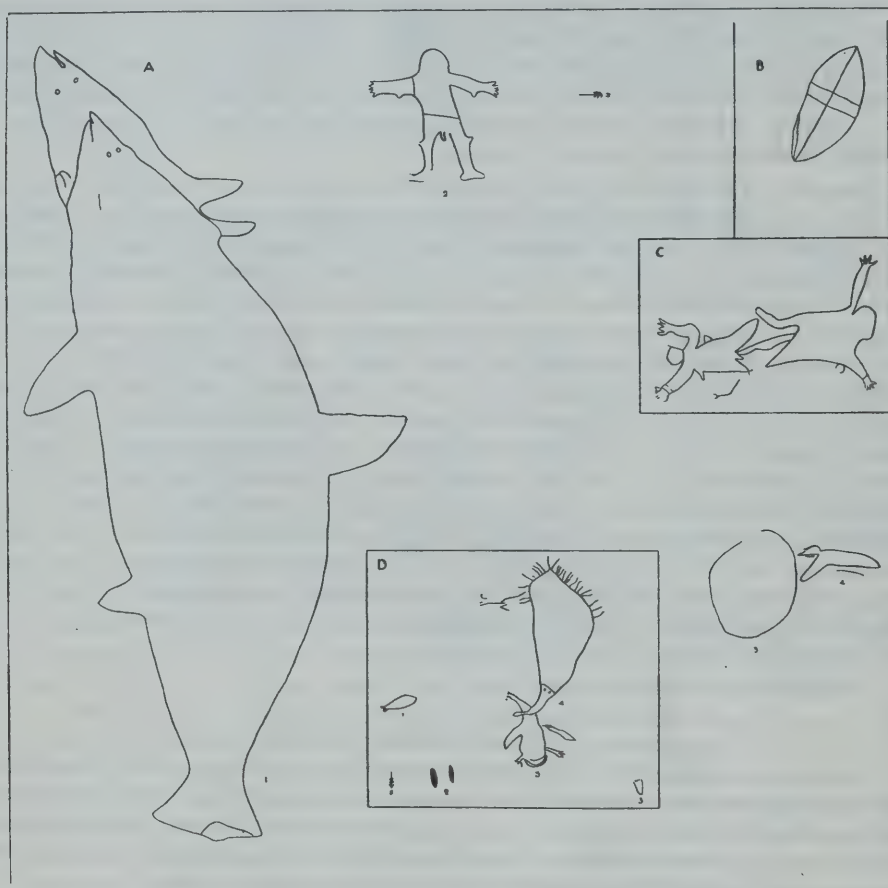


Fig. 9. Group 49 (A-C), Group 50 (D). Kuring-gai Chase.

would become stranded and provide a feast for the Aborigines. The fact that the man and his shield are later additions to the group also suggest that they might represent a legend in which the characters featured have been illustrated on the rocks at different times, even in different generations.

Series III (Figure 9C). On a narrow flat rock below the southern side of the large outcrop are the figures of a man and woman copulating. Both are wearing bands across one

wrist, and four fingers are shown on three of the hands. The woman is wearing a necklet, and there is a small circular appendage in one arm-pit of the man which might be his dilly-bag. Quartz crystals were carried in such bags. There is also a curious bent line with a bifurcated end beside the woman. The representation of the act of sexual intercourse has several interpretations. One is that of a woman seduced in the bush by the man, another that dream-time spiritual beings are committing the act, and a third that it was the consummation of a marriage.

Technique and Preservation. In series I the whales, circle and bird have wide, deep outlines consisting of conjoined punctures which have weathered to what appears to be a smoothed groove up to 1 in. wide. The man has sharp, well preserved outlines up to $\frac{1}{2}$ in. wide in which the conjoined punctures are clearly shown, and is obviously of later date than the other figures. The shield in series II has sharp and clearly defined outlines $\frac{1}{2}$ in. wide, with oval punctures from $\frac{1}{2}$ to $\frac{3}{4}$ in. long. In parts this outline suggests the use of an edge-ground axe or other chopping implement. The man and woman in series II have well preserved outlines of conjoined punctures up to $\frac{1}{2}$ in. wide and $\frac{3}{16}$ in. deep.

Recorded by the author, with Mr. and Mrs. A. D. G. Downer, in July, 1945, and reported by Mr. H. C. Walters.

Group 50, Salvation Creek. (Figure 9D.)

This very interesting group is situated in the bed of Salvation Creek, just below the eastern side of West Head Road, where the bed of the creek is a large rock. The creek flows down the ridge into Towler's Bay, Pittwater. On the western and higher side of the road the creek flows through a swamp, but the potholes of clear water in the rocky bed near the carvings were no doubt fully appreciated and utilized by the Aborigines.

The group consists of (1) a small fish on a small rock surface between the channels of water; (2) two axe-grinding grooves beside the water; (3) a human mundoe near the filling supporting a culvert over the creek, it being probable that other mudoes are covered by the filling; (4) a creature almost 7 ft. long, whose broad body tapers to a long pointed head bearing two eyes and a long beak, while there is a row of spines around its posterior end; its beak crosses the (5) neck of a bird like a duck with one wing detached, two well-marked legs with toes, and an arc around its tail. No. 1 is 10 ft. north of Nos. 4 and 5, and No. 3 is 28 ft. to the north of them. Water is flowing through a narrow channel over the ends of one wing and foot of the bird. There are indications of other figures, but as the road workmen chopped out portion of the rock, and also mixed concrete on the latter, they can no longer be determined.

The outlines consist of conjoined punctures from $\frac{1}{2}$ to $\frac{3}{4}$ in. wide, and $\frac{1}{8}$ to $\frac{3}{16}$ in. deep, all belonging to the one period. This is a favourite picnicking spot and the figures are now beginning to be worn away by the feet of visitors.

No. 4 is a unique figure among the engravings of the Sydney-Hawkesbury district. Its beak has been engraved deliberately across the bird's neck as though to indicate that the two are fighting. It could represent a spiny ant-eater picking ants from the body of a dead duck, or a spiny ant-eater or other creature of the dream-time guarding a sacred site in the creek against an intruder of the bird (duck) totem. The presence of the human mundoe indicates a ritual track.

Recorded by the author, with Mr. and Mrs. A. D. G. Downer, in July, 1945.

Group 51, Topham Trig. Station. (Figure 2C.)

This group is situated about one furlong from the western side of West Head Road, on the northern side of the northern branch of a creek which flows along the northern side of Topham Trig. Station. The site is due east of the head of America Bay, and the figures are engraved on one of a series of flat and very large rock surfaces forming a semi-circular ledge over which the water flows. There is a low rock-shelter, not used by the Aborigines, above them over which water drips.

The figures consist of (1) a small circle ; (2) a broad fish ; (3) a broad shield 3 ft. 3 in. long ; (4-5) two fish, one of which is probably a leatherjacket. The outlines are all of conjoined punctures, $\frac{1}{2}$ in. wide and from $\frac{1}{8}$ to $\frac{1}{4}$ in. deep, forming clearly defined and well preserved grooves which form a good example of the technique.

This group probably represents casual art depicting a catch of fish, with the fisherman's shield, and his camp or gnarl container (the circle).

Recorded by the author, July, 1946.

PATONGA DISTRICT.

Groups 52-53 at Patonga were discovered by Mr. Ned Hines about thirty years ago, and he kindly showed them to me in 1947.

Group 52, Patonga. (Figure 10.)

Situated about one-quarter of a mile from the end of a broad flat-topped spur which runs parallel with the Patonga Road at the top of the steep slope down to the settlement. Beside the road there is a creek which contains permanent water in numerous pot-holes, and there are also axe-grinding grooves along the creek bed. The site may be seen from the road, and its Military Map reference is 275.553. It consists of a series of flat rock surfaces, broken here and there by patches of vegetation, on the eastern side of the spur. The rocks run north to south, and the various series are well separated on them. Spiky hakea bushes predominate in the surrounding scrub, but the site is in very open country with a scattered growth of trees. The various series are described in order from the south to the north.

Series I (Figure 10A). On a small, flat rock are the following figures: (1-2) a man and a woman in conventional pose, the man 5 ft. 9 in. high wearing a girdle, the woman 4 ft. 9 in. high ; (3) a human mundoe with a curved line beside it ; (4) an incomplete boomerang ; (5) a curious anvil-like figure 10 in. long ; (6) a fish 2 ft. 9 in. long of the bream type ; (7) a small fish, cross, or a kangaroo track ; (8) 36 ft. away is a bream-type fish. The outlines of the man, woman and mundoe are smooth and weathered, $\frac{3}{4}$ -1 in. wide, punctures being visible in them. The outlines of the other figures are of conjoined punctures $\frac{3}{4}$ in. wide and from $\frac{1}{8}$ to $\frac{1}{16}$ in. deep, most of them being indistinct, but the boomerang is sharply defined and much more recent in origin than any of the other figures.

Series II (Figure 10B). Forty feet northward is another rock surface bearing one of the most interesting figures on the site. No. 1 is a unique engraving which looks at first sight like a human head and bust, with four bulbous appendages across and between which are straight grooves more sharply engraved and apparently of later origin than the remainder of the figures. On one side the outline runs into a natural crack in the rock (shown by dotted lines). Although it might represent the head of a man in ceremonial attire or that of a spiritual ancestor, it is also possible that it depicts a branching yam, and its identification

is thus indeterminate. Its outline is a smooth groove 1 in. wide and up to ¼ in. deep, well preserved. Nos. 2-5 are four sets of incomplete lines of indeterminate figures.

Series III (Figure 10C). Thirty feet north of series II, on another flat rock, on a rough surfaced portion of which is carved (1) a large but crude kangaroo, 12 ft. long, poorly proportioned, with a big head, fat body bulging in the middle, long fore-paws and short hind

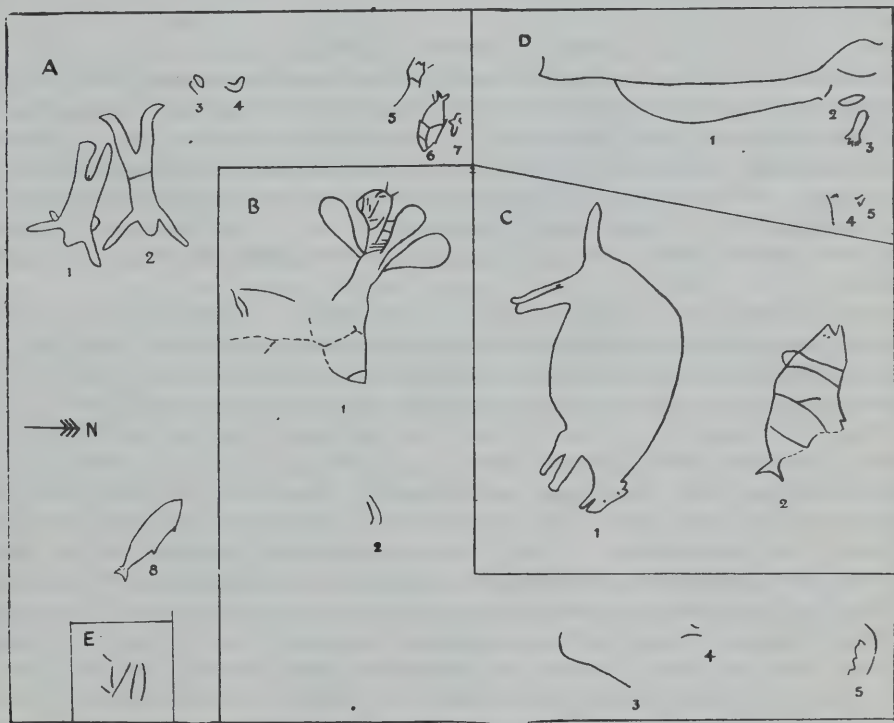


Fig. 10. Group 52, Patonga.

legs of which two are shown in each pair. The tail is also short. The animal appears to be running instead of leaping. Above it is a long line that might be a spear but is now so weathered that it is difficult to say whether it was originally engraved or not. There is a long crack on the northern side of the kangaroo. The outline is 1 in. wide and from ⅜ to ½ in. deep, and is very well preserved.

On a smooth flat portion of the same rock is a large fish almost 7 ft. long, with four bars across its body and a short one projecting from the middle bar. It has an open mouth and a beautiful tail. Its outline consists of conjoined punctures 1 in. wide and ⅛ in. deep, but portion of one side has weathered away.

Series IV (Figure 10D). One hundred and fifty feet north of series III, on a smooth flat rock surface, are the following figures: (1) a very long outline like a bark canoe in profile 15 ft. long and 1 ft. 7 in. deep; (2) axe-blade or a mundoe; (3) a well defined

human hand ; (4) probably another hand ; (5) a pair of wallaby tracks. The outlines are all smoothed by weathering, but part of the canoe, the hand, and axe-blade are well defined. They are approximately $\frac{3}{4}$ in. wide and $\frac{1}{8}$ in. deep.

The whole of this series appears to be a disconnected one consisting of figures done at different times, without any particular relationship between them.

Recorded by the author, November, 1947.

Group 53, Patonga. (Figure 5.)

Situated on the edge of a high cliff which forms the northern shore of Broken Bay, extending eastward from Patonga. The site is reached by following the old road along the cliffs from Patonga to Pearl Beach ; this road branches from the new road at a point $1\frac{1}{4}$ miles from Patonga. The carvings are about 1 mile along the road, the Military Map reference being 294539. At this point is a series of rock surfaces running east-west and up to 30 ft. wide, extending several hundred yards along the cliff top. From them are to be seen magnificent views of Broken Bay, including Cowan, West Head, Barrenjoey, and across Patonga.

Series I (Figure 5A). At the eastern end of the series on a long flat rock, and only a few feet from the edge of the cliff, are engraved two indistinct figures, one of a man 3 ft. 3 in. long, and below him another small indeterminate figure which is incomplete. Their outlines are smoothed and very weathered, up to $\frac{1}{2}$ in. wide, visible only in the best light.

Series II (Figure 5B). About 80 yards east of series I is another rock surface bearing an interesting set of figures, as follow : (1) a goanna 4 ft. 2 in. long, with a long tail and slightly twisted body, on a narrow part of the rock. Its outline of conjoined punctures $\frac{1}{2}$ in. wide and $\frac{1}{4}$ in. deep has been gone over with a steel pick by a vandal who also carved his initials in the rock beside it ; (2) 10 ft. eastward is a broad well-portrayed fish almost 18 in. long, its well preserved outline being of conjoined punctures $\frac{1}{2}$ in. wide and $\frac{3}{16}$ in. deep.

Thirty feet eastward is a compact group consisting of (3) a striped mammal, like a native cat, 4 ft. 6 in. long, in a vigorous action pose as though running ; it is at (4) the head of a man, almost 5 ft. high, with two oval fingers on one hand and three fingers on the other hand, a rayed circlet, and a girdle ; below his left hand is (5) a slightly curved oval figure 9 in. long which might be a mundoe, and a couple of feet below it is (6) half of a narrow fish ; to the west of this man is (7) a curious line figure of indeterminate nature, and another (8) man 6 ft. high with thick arms (there is a well marked elbow on one of them), and a boomerang or sword-club in his left hand.

This is a compact set of ceremonial significance, perhaps of a fight between two men, one of them a fish totem, and the other a native cat.

Their outlines are all of conjoined punctures $\frac{3}{4}$ to 1 in. wide and $\frac{3}{16}$ in. deep, but the man holding the boomerang appears to be older or more weathered than the others ; his outline is very faint and his feet indiscernible.

Series III (Figure 5C). About 60 feet eastward is another long rock on which is a scattered series of figures comprising (1) a fish 3 ft. long ; (2) a wallaby almost 5 ft. long with fore-shortened humped body, long tail and long hind leg, in the pose of alarm just about to leap, after having bunched himself up for the spring. He has a band across the base of the tail, hind leg and neck ; further on, the rock narrows and on it (3-6) four incomplete figures of indeterminate type, one of which might be a mundoe ; 24 ft. further eastward, on

a broad portion of the rock, are (8) an elongate indeterminate figure, 14 in. long ; (9) a pubic apron 16 in. long ; (10) a pair of wallaby tracks ; (11) hind leg and tail of a wallaby ; (12-13) another two pairs of wallaby tracks ; 14 ft. eastward is (14) a huge and well formed fish almost 6 ft. long, with a posterior band across its body and a crescentic line on one side.

The outlines are all of conjoined punctures of varying size. Nos. 1-2 from $\frac{3}{4}$ to 1 in. wide and up to $\frac{3}{16}$ in. deep ; Nos. 3-6 have smooth and weathered lines up to $1\frac{1}{4}$ in. wide ; No. 9, $\frac{1}{2}$ to $\frac{3}{4}$ in. wide and from $\frac{1}{8}$ to $\frac{1}{2}$ in. deep ; No. 14, 1 in. wide and $\frac{1}{8}$ to $\frac{1}{4}$ in. deep.

The locality is a favourite haunt of rock and black-tailed wallabies. The incomplete wallaby and its three sets of tracks are suggestive of a hunt.

The whole of series I-III contains two groupings, that of the native cat or possum and two men, and that of the wallaby hunt. The figures as a whole were probably made at different times when the natives rested at this beautiful place, where the hunting of wallabies, phalangers and other mammals could have taken place nearby.

Series IV (Figure 5F). At map reference 295.541, one-quarter of a mile north-east of series III, is the engraving of a flying phalanger on a narrow, flat but sloping rock about 10 ft. north of the old road, from which point Barrenjoey is at 119° and Flint and Steel Point is at 193° . The figure is well proportioned in the gliding pose, is almost 2 ft. long, and bears a number of punctures on the head and upper body as though to denote markings. It is engraved beside a shallow depression in the rock which is now full of soil but which would hold water in wet weather. The outline of the phalanger is of conjoined punctures $\frac{1}{2}$ in. wide and $\frac{3}{16}$ in. deep, very well preserved.

Series V (Figure 5D). Near the head of Patonga Creek, on a small rock, with an oblique face at an angle of about 45 degrees, at the water's edge on the eastern bank, two human hands are engraved at right angles to one another. The outlines are of conjoined punctures $\frac{1}{2}$ in. wide and $\frac{1}{8}$ in. deep.

Series VI (Figure 5E). These two curious indeterminate figures are engraved on a small flat rock, on the top of the ridge about a furlong from series I, towards the Patonga-Pearl Beach road. The outlines are of conjoined punctures $\frac{1}{2}$ in. wide and $\frac{1}{8}$ in. deep.

Recorded by the author, November, 1947.

Group 54, Warrah Sanctuary. (Plate B.)

The following series I-VI includes several sites within the Sanctuary and two outside its boundaries. The Sanctuary consists of typical sandstone ridges and gullies on high ground lying above Patonga, Pearl Beach and Ettalong.

Series I (Plate B, Fig. 6B). Situated about 100 yards from the southern side of Patonga-Ettalong Road, in the Sanctuary, in a north-south line with Warrah Trig. Station. The group comprises a whale 24 ft. long, on and around the nose of which is a series of eight irregular ovals. The whale is in a pose similar to that when these mammals arch their back when rising to the surface of the water. Within its outline are two small fish, and an irregular semi-circle of very small unshaped stones, from 4 in. to 1 ft. long. They enclose a V-shaped engraving.

The engravings are all considerably weathered and smoothed, but one fin of the whale, which was covered by soil, when revealed showed punctures $\frac{1}{4}$ in. in diameter and almost the same depth, some being out of alignment as though the artist had used a striking tool and not a chisel-mallet combination.

The stones are obviously arranged in the semi-circle. One is standing on its edge and another one is resting on two others. In the latter set the two upper stones are flat and slope at 30° and the bottom one is a piece used to prop up the middle stone. It is possible that the site was an increase centre for whales or the small fish. The small V-sign within the stones may have a special significance.

Series II (Plate B, Fig. 6D). One hundred and fifty yards north-east of series II is a slab of sandstone 3 ft. by 2 ft. in size, set up at an angle of 45 degrees against another slab.

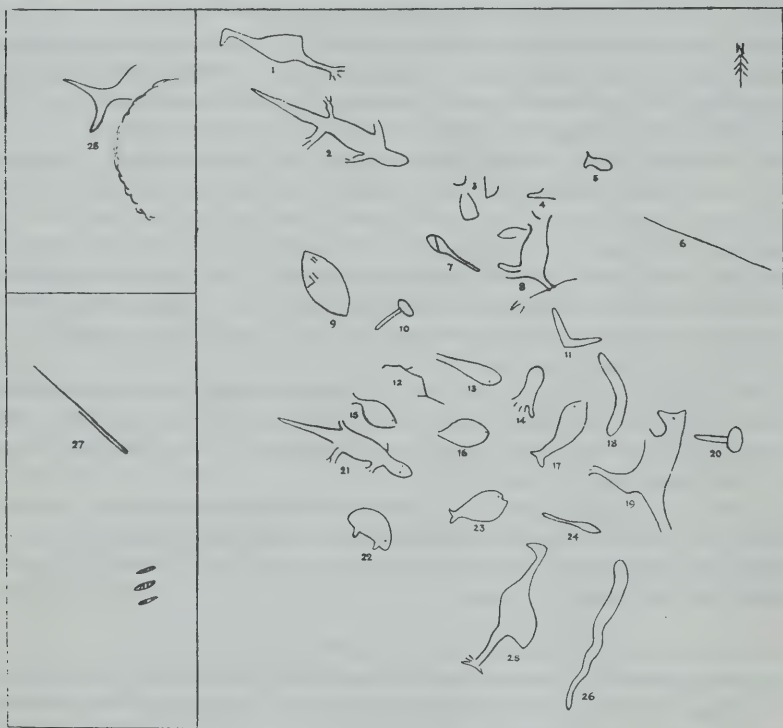


Fig. 11. Group 55, Terrigal.

Series III (Plate B, Fig. 6E). Two hundred yards to the north-north-east of series II, on the northern side of the Patonga-Ettalong road outside the Sanctuary, on a large rock surface below the level of the road. The outlook is open towards the north. Here are engraved a man 6 ft. high, with three mundoes and several unfinished figures of indeterminate nature. They have punctured outlines now smoothed by weathering, up to 1 in. wide. Fifty feet to the west of them is a curious bag-like figure with an outline of conjoined punctures $\frac{1}{4}$ in. in diameter and $\frac{1}{4}$ in. deep, showing distinct punctures which are not weathered to the same colour as the rock surface. It is possible, therefore, that they were done just prior to the custom being abandoned, or before the white man exterminated the Aborigines.

Series IV (Plate B, Fig. 6A). On the northern side of series I, the whale group, is a deep gorge running north and south. About one-quarter of a mile south-west of series I an arrangement of stones occurs on a large flat rock surface 30 ft. above the bed of the creek. The stones are now somewhat disarranged by cattle, but the complete series evidently formed an oval figure 32 ft. long with a circle at each end.

Series V (Plate B, Fig. 6C). Directly in line with Warrah Trig. Station and series I, and pointing towards the former, is the engraving of a small fish with unweathered punctured outlines.

Series VI (Plate B, Fig. 6F). Situated beside the Patonga-Pearl Beach road, on the northern side and a couple of miles from Patonga, is a fairly large sloping rock surface with a marsh to the north. On it is engraved the small figure of a man 3 ft. 6 in. high, with a long curved line running from his ankle over his head and beyond his body. Beside the line is a boomerang, and there is a fish beside his foot. The outlines are $1\frac{1}{2}$ in. wide. Fifty feet due west is an animal or bag-like figure. The significance of the series is unknown.

Recorded by the author and C. Pryde, 1942.

Group 55, Terrigal. (Figure 11.)

This group is notable for its remarkable situation and for the manner in which the subjects are depicted in so compact a group. It is situated on the edge of the rock platform below Broken Head, on the side of a large expanse of flat, grey sandstone; below the group is a number of large blocks of stone pounded off the edge of the platform by the sea. The figures are covered by the wash of large waves at high tide, and this has worn away several figures on the edge till they are now very indistinct or indeterminate. Whether others were carved on the large detached blocks I cannot say.

The group consists of 31 miscellaneous figures, none of which overlap, though they are close together and form a neatly arranged tableau. The two emus (Figs. 1, 25) are both standing upright and are approximately 4 ft. 6 in. high. The two goannas (Figs. 2, 21) are rather broad but typical examples 3 ft. 8 in. and 5 ft. 6 in. long. The two dingoes (Figs. 8, 19) are well shaped examples 2 ft. 6 in. and 4 ft. long, the head of one having weathered away, and the larger one has long powerful hind legs. There are also (26) a sea-snake or conger eel 5 ft. 2 in. long; (22) a small wombat 19 in. long; and (14) a fine human mundoe. The six fish are from 6 in. to 2 ft. 3 in. Figs. 15, 16, 23 comprise three of the broad type, which may be bream, drummer, blackfish or groper, three (Figs. 5, 13, 17) long slender types, one of which is in a graceful swimming pose, and one flat type which is probably a flathead. There are seven (Figs. 3, 4, 8, 12) indeterminate and incomplete figures, some of which are probably fish, but one is a curious elongate tailed hexagon. The remaining eight figures are weapons, and include (Figs. 10, 20) two hafted stone axes; (7, 24) two conical-headed clubs, one of which has a bar across on the head; (11, 18) a returning and non-returning boomerangs; (6) a spear 4 ft. long; (9) a broad shield which apparently had crosslines of the painted decoration shown on it at one time. These weapons are approximately natural size.

One hundred feet to the west, across the rock platform, is a thin line figure which is probably a spear on a spear-thrower, 4 ft. 3 in. long (Fig. 27) which are 80 ft. south-west at base of cliff. Three hundred feet to the west, on the northern corner of the rock platform, is the tail of a shark or large fish (Fig. 28) at the edge of a shallow pool.

Technique. The outlines of all of these figures consist of conjoined punctures from $\frac{1}{2}$ to 1 in. wide and from $\frac{1}{8}$ to $\frac{3}{16}$ in. deep, but many of them are just discernible. The punctures are well shown in the spear (Fig. 6) which is, strangely enough, the lowest figure subject to most washing by the waves. The emus, goannas, echidna and some of the fish are well preserved.

Remarks. This group appears to illustrate some of the many animals and fish hunted by, and some of the weapons of, the local Aborigines.

Recorded by the author and F. L. S. Bell, October, 1946.

The scale adopted throughout the diagrams is 1 inch equals 8 feet.

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F. D. MCCARTHY.

REVIEWS :

Primitive Heritage : An Anthropological Anthology. Edited by Margaret Mead and Nicolas Calas. Victor Gollancz, London. 1954. XXX, 592 pp. 21/- sterling.

As the title indicates, the editors of this book have attempted to present a picture of primitive life by gathering together a number of excerpts from the rapidly expanding literature of anthropology. Despite the statement on the blurb, it *has* been done before, and been done most successfully. Calverton's "The Making of Man," issued in 1930, was an excellent piece of work. This book is also an excellent piece of work.

With two such editors, it could hardly fail. Of Margaret Mead, there is no need to speak. Her reputation as an interpreter of the ways of primitive man (and woman) is high, wide and handsome. She has written an introduction to this book under the title of "The Restoration of Wonder." And that is just what it sets out to do. It retraces, for the general reader, the shock and wonder of the Western world at the differing ways of other people. Of Nicolas Calas, there is need to speak since he has yet to make his reputation. This book and his prefatory essay on "The World as Stage" will certainly help. According to Dr. Mead, it is to him that we owe the idea of the anthology, and indeed, the major part of the work of selection.

Briefly, the editors have arranged their material in such a way as to show first what the people of classical times—the Greeks, Egyptians and Romans, thought of primitive man and then what the armchair philosophers thought about him. After a brief dip into anthropological theory, the book immediately becomes a sheaf of first-hand observations of native life, divided under such headings as "Children," "Puberty," "Marriage," "Art", "Economics," "Religion," and finally "Death" and "Immortality."

The job is well done. The interested layman and, indeed, the serious student of anthropology will find that this book gives them a better and more informed and various idea of the nature of primitive man and the theories concerning him. It fills a real gap in our

literature since it attempts that most difficult of all tasks, and one which most anthropological writers shun. I refer to the making of a synthesis of modern theories and facts against a background of over fifty years of thinking and writing. Of course, as with all such works, this anthology has a tendency to stress the curious, but apart from this one fault the book is a useful publication and one well worthy of a place beside "The Making of Man," on anyone's shelf.

F. L. S. BELL.

PROCEEDINGS OF SOCIETIES :

Annual Report of the Anthropological Society of Queensland, 1954. *Summary of the report delivered at the Annual Meeting of the Society.*

Your Council has pleasure in submitting the Fifth Annual Report of the Society for the year 1954.

This year has been a most profitable one to members, as a more than usually interesting series of meetings has been held. These meetings included :

A display of films at the Queensland Museum.

Mrs. Duncan Kemp speaking on the Natives in the Winton District.

Reading of Papers and Exhibits.

Mr. R. T. Roscoe speaking on the Blending of Culture in New Guinea and Papua.

The Natives of the Ooldea District.

Films of Mornington and Benedict Island natives.

President's Inspection Night at the Museum.

Average attendance at meetings has been 15-20. No official excursions have been held during the past year, but individual members have inspected localities of interest and reported their findings to the Council. The matter of preservation and protection of the remaining relics of the Aborigines in Queensland is constantly in the minds of your Council, and we accord our thanks to members and others who in this past year have brought to our notice matters which needed attention. We have on occasion given advice *re* the protection of Bora grounds, and hope that our efforts will be successful in these matters.

At meetings, interesting additions to the Museum collections have been displayed, and we thank our friends who have made these valuable donations. It is hoped the permanent storage of these relics will be finalized during this present year.

We have continued to send out a précis of meetings to all members, and trust we will be able to continue in this way in the coming year.

The Society was represented by Mrs. F. W. Robinson at the Queensland women's welcome to Her Majesty the Queen, and a suitable floral token was presented.

During the year we lost by death Mr. Arthur Groom, of Binna Burra, Mr. Fitzgerald and Mr. Holle, to whom we are indebted for the supply of a tape recorder on occasions for recording songs and stories obtained from some of the few surviving members of local Aboriginal tribes.

Our first President, Professor Wilkinson, lost his wife during the past year, and to our bereaved members and their families we extend our sincere sympathy.

Our membership now stands at 72, this being an increase of 4 on last year's figures.

CORRESPONDENCE, NOTES AND NEWS :

A Tikopian Talks.

Sir,

These notes were secured by me from Nori Korapana, one of the inhabitants of the island of Tikopia, with the help of the second engineer of the Mission Ship *Southern Cross*, which was in port here. This officer put my questions in "pidgin" English to the native, and translated his answers to me. The Tikopians are of Polynesian blood, and this man was one of the crew of the ship.

The island is a very small one—roughly two by three miles—and has a very limited area of arable land. Its population was stated to be about 1,500, and there are five chiefs over these people and their headship is hereditary. They are averse to allowing missionaries on to the island, fearing that they will thereby lose their authority and control, though one of the tribes has recently consented to try it out, and the others have the matter under consideration.

Owing to the very small area of land suitable for cultivation, the number of people that can exist on this island is strictly limited, and therefore infanticide is practised. There are no fauna at all there, but yams and taro are grown as much as possible. The land is handed down from father to son, and to help limit the population only the eldest son is allowed to marry, and (I was told) the other sons, at one time, had to put out to sea in canoes and so commit suicide. This has now been stopped (as well as infanticide) by the government, which has made arrangements for excess numbers to be taken to more productive and larger adjacent islands, chiefly Vanikoro, which is about 120 miles away (three days and three nights travel if by canoe). There is one small island, called Anoota, which is only about 40 miles away, and with which there is a

limited amount of social intercourse and intermarriage.

The people live in huts built so as to stand up to heavy storms, and the doorways are four in number and about three feet high.

When a baby is born, the two mothers-in-law act as midwives, and the birth takes place in their usual home. Children run about naked till about five years of age, when they receive their *lava-lava*. As they grow up, the sexes are very modest in all their actions. Men and women have different places in which they may bathe, and would never think of letting anyone see them using their toilet arrangements. And while the males micturate in the usual way anywhere, the women have to do so in the sea or in water.

Circumcision is practised, and the reason given is that they just follow the practice of their first ancestor and they do not know from where he came. The boy is operated on when he is about nine—originally a sharp shell was used as a knife—and the wound is dressed with the juice pressed from a plant like a watercress that grows in the swamp, and is washed daily with salt water. The wound takes a month to heal, and the boy gets down on all fours to urinate, so as to keep the urine away from the wound, and they keep away from the womenfolk for six weeks. They are painted over daily with a yellow dye for four months, and do not wash nor do any work. At this same stage of their development the girls are painted across their breasts with a red dye for six months. The brother (or sister if no brother) remains with the boy, and they change their living quarters every two days (i.e., they go round to different houses of their "line"). He dresses his own wound.

No sexual relationships occur till the lad is at least fourteen, and if he is not married

to the girl but pregnancy ensues, he is bound to marry her. But if in the meantime, on account of disagreement, the two separate, then she is looked upon with disfavour by the other men, who if they know, avoid her. A man may have only one wife, though in "old time" a chief might have two or three. Once a man is married, sexual relationships outside marriage are not allowed for either side. And once a girl is married, she becomes virtually a servant to the family, but is quite happy under it all. The wife is originally secured for her husband by his whole "line" buying her for him from the parents, the price paid being household belongings and native rope, the same price being paid for any wife.

Married women all have short hair, and it is cut by the husband's womenfolk. Previous to marriage, it is allowed to grow long.

On the morning after their marriage, husband and wife take presents to the bride's parents, and the chief's son is there to see it done and to recognize the marriage officially. After this is done the new bride goes into the bush to a feast with all her friends, and weeps because this is the end of all her old way of life and freedom.

No intercourse takes place during the first week of married life, and great jubilation is expressed if the husband is then sure that his wife is a virgin, and he adorns himself with flowers and openly expresses his satisfaction. So does his whole "line"—that is, all his relatives. If she were not a virgin, the man who had originally "spoiled the mary" would openly point scorn at her, and the husband and the whole line would be shamed and show it, but the marriage would still stand.

If the wife is stolen, the husband calls on his whole line for help (this means practically the whole village), and they go looking for

the offender. When they find him, they burn his house and send him out to sea in a canoe to die, and the wife is sent back to her parents to be taught how to behave herself, and afterwards she will be sent back to her husband. But when the whole line is called in in this way, they first call on the spirits of their ancestors to help them. These spirits live either up in the sky or in the sea, and are called by their names. The procedure is for an old woman or an old man belonging to the family that is concerned to act as a medium, and to go into a trance, and the spirit speaks through her or his mouth. He or she shakes all over, and the spirit will indicate who it is that is speaking. If no response comes from the spirits in the sky, then those in the sea are called upon. The whole lot are well drugged with betel nut for the performance.

It is their practice to call on the spirits of their ancestors if help is needed at any time for other reasons, and their grandfather's spirit will come to their help if they fear the presence of an evil-intentioned spirit and will drive it away for them.

There is no idea of reincarnation, but all the spirits of the dead go to "a happy hunting ground," those of the chiefs going, to a higher place than the others, because "he has more power." When a person dies two spirit women come down and take the spirit and wash it in the sea, and send it on to where the other spirits are. In the case of a chief the spirit does not leave the body till the fifth day.

There are no witch-doctors or medicine men in the island, but there is a ceremony over which the chief presides, and it is as follows: There is one special coconut tree in the village which is tambu, and its nuts are used when spiritual help is needed. The chief then takes one of the nuts from this tree and places it on a mat in the special

house where all the chiefs are buried, and alongside the hut is placed a receptacle full of coconut oil. There the chief makes known his requests—either for the healing of the sick person, or to dispel a severe storm, or to bring rain in case of drought, or for a good harvest, or for help against his enemies.

The food eaten in the island was chiefly fish, for there were no native fauna. And the only kind of fish that they would eat were those with a forked tail—eels, seasnakes and octopuses were not eaten. Yams and taro were grown, and there was a special ceremony associated with the yam crop, because their first ancestor made his first meal off yams. In one special garden the chief presides at this ceremony, when the yams are planted there, and over them he ties a piece of bark on string so that it will swing over the crop. When they are ready for digging, about twenty men gather there, dig them up, and take them to the tambu house. While this is being done, all the women and children are cleared out of the way so that they will not be able to watch. The yams are left in the house for one day. They are then taken to the kitchen associated with this house and adjacent to it, and cooked. Then they are put back in the house and the chief "calls up the spirits of the dead through the yams." The men then sit down and eat these yams. A similar ceremony is also associated with taro.

Considerable ceremony attended the burial of a chief, all of whom were interred in the same house—*faree tapu*—and when this was full of graves the others were buried in graves dug outside and around this house, but his personal effects were put inside the building. Small stones were put around the graves, and a big stone at the head. The care of this burial house fell to the lot of the chiefs. The graves are very large, being

about ten feet square and twelve feet deep, and were dug out with a wooden shovel. A chief is not buried till four days after his death, and during this time the whole village weeps and wails and cuts themselves with shells, at the same time praying to the chief to look after them well. They also burn their tongues and foreheads with a firestick, as well as their cheeks and shoulders; and they also do not shave—all out of respect for their dead chief. The body is wrapped in about 200 sleeping mats (hence the size of the grave), and his personal effects are buried with him, as well as the small insignia that he wears around his neck as a mark of his rank. The body, all wrapped up, is lowered into the grave by coconut ropes, and reposes on coconut leaves that line the bottom of the pit. Food is put on the top of the grave, and renewed on the fifth day when his spirit leaves the body. His own tapa cloth lava-lava is cut up into small pieces and distributed to the tribe, who wear it round their necks for four months in remembrance.

L. P. WINTERBOTHAM,
Hon. Curator,
Anthropological Museum,
University of Queensland.

18.8.54.

[No editorial responsibility is taken for any alleged statements in the above letter. Readers are advised, however, that Professor Raymond Firth has made a very careful appraisal of Tikopian culture and has published several books and articles on Tikopia.]

Reef Islands.

Sir,

These islands are inhabited by Melanesians, and my informant was one of these islanders, by name Niambau. He was one of the crew of the mission ship then in port. He spoke

in pidgin English, and one of the officers acted as interpreter. He told me that in old times a man could have more than one wife, but not now that the "mission" was there. He said that there are about ten islands in the group, and on them are grown bananas, pawpaws, sweet potatoes, breadfruit, but no yams, as the soil is too shallow. Fish is their main article of diet.

Children wear their first lava-lava, which is called their "calico," when about seven years old. The occasion is marked by a feast and the child has its first calico fitted on by a "good friend" of the family, and as a token of appreciation for his good deed he is given a present of £3 to £5. This will be repaid to the original family when they in turn are asked to perform the same ceremony for one of the members of the "good friend's" offspring.

Circumcision is not practised.

Marriage is entered into when the boy has sufficient growth of hair on his face to be shaved by a sharpened shark's tooth.

The purchase price of a wife is a long string of parrot's feathers—red ones—20 to 30 feet long—and a strong attractive girl is worth about £50, that is five £10 rings of feathers. A poor looking girl would fetch only about £15, and a widow £6 to £8.

The girl's father has to provide a feast, and so has the husband-elect, but he has to pay the father the purchase money first. Then he too makes a feast at his own home, and there the girl just joins him. They live in his old home for a week, and after that the whole community turns to and builds them their own house. These people value virginity, and in old times if the husband found that his wife had been "spoilt," he used to go after the other man with a bow and arrows to kill him. Their arrows were poisoned with the leaf of a special tree,

to which was added the ashes from another tree.

Unmarried girls just stopped in their own homes and worked. Fish was their staple article of diet, and one way of catching them was to make a large basket of coconut palm leaves and lay it on the bottom of the water. The fish were then driven over it, and as they arrived in position the sides were pulled up by natives standing round, and the fish caught. The size of this basket trap was described as about 24 feet by 36 feet. Nets are also made of vegetable fibre. Fish was also dried and traded to neighbouring islands for yams and taro. This was chiefly undertaken if the island got short of food. The chief was made the "banker" for the island and, in one or two big canoes with a crew of three to five men in each boat, would go across to Santa Cruz with a load of fish and barter for yams and taro. This was a journey that occupied nine to twenty-four hours.

To catch sharks, they first attracted them by knocking together under the water a ring of coconut shells that they had strung on a length of lawyer cane and tied into a circle. The sharks came to investigate, and as soon as one was seen approaching a small line with a fish attached was thrown out as a lure and pulled slowly towards the canoe. As the shark came quite close, the lure was lifted above the water. The shark reached up for this, and as it did so a big rope was slipped as a noose over its head behind the gills. As soon as the noose was tightened, the shark made off and kept going, towing the canoe till it got tired, when it was pulled in and killed with a club by a blow on the head.

The islanders believed in spirits, which they thought dwelt in stones which had been brought from Santa Cruz in the dim past. Each village had its own particular building

or temple in which this stone was housed, and each village had its own name for the particular spirit in that stone. If they neglected the spirits, these would get very angry and bring up storm and rain and lightning. The people then made an offering to the offended spirit and promised that if he would help them, they in turn would keep his house in good order. A number of such stones might be on an island, but there would be a different spirit in each one.

All the spirits of the dead live in the bush and can be heard talking in the early morning and evening and through the night, but the natives were not afraid of them. In the olden days there was apparently thought transference, and spirits would come and tell them if someone had died, but "now no more." There was no killing by suggestion—i.e., by "pointing" or "singing," as in Australia.

L. P. WINTERBOTHAM.

Brisbane, Queensland,
18.8.54.

The Batjala Tribe of N.E. Queensland.

Sir,

Barpoodera is a fully initiated member of the Batjala tribe that lived on Garee (Fraser) Island and the adjoining mainland. He was one of the song-makers of his tribe and is well acquainted with 'Gaiarbau, who was a song-maker of the Jinibara tribe. Of the two, I should think that the latter was the more reliable.

He stated that while participating in a corroboree when he was about fifteen years of age, he was caught by the two arms and was taken with the other boys, shivering with fright, to the smaller "Bora" ring. He was taken in charge by his great-grandfather Nardtembarum, and was afterwards led off into the bush for several months on a walkabout.

All the time that the initiates were in the ring they had to sit still with their fists tightly clenched and watch the elders. They were not allowed to speak or laugh, or even smile. These rules prevailed every time they went into the ring for the next ten years or so, that is, till they were fully initiated, and during all this time they were not allowed to go back to their parents. They were taught the laws, customs and legends belonging to the tribe.

This song was sung in the ring by the initiated men :

Monyoorn woolboo baiyindoo.

Possum drum beat.

The bull-roarer was swung, and they all called out :

Owh owh owh.

This went on every afternoon for several weeks.

In the big ring the words spoken were :

Burrun.burung.goor nulla.dew wurren

and these words indicated the way they had of making the muscles of their limbs, shoulders and abdomen to shake. Then they would cry out again :

owh owh owh. Eeh eeh eeh.

Barpoodera states that the following words were spoken to the initiates in the small Bora ring :

Munning.burrun yinwoonmee naditchew

Headman come outside me

nagoobar wundja yairman.

look at you where are you going.

Yarriburra naditchew gnyinnar nagoobar.

Come here me you look at.

These words too were spoken to the initiates in the smaller bora ring.

Bundindowar naditchew baiyindoo

Bullroarer me make it talk

dunabaroo booragundoo naditchew

those people hear me

goorienun woopinnar munning-
turning round clever man headman.
burrum.

The following words were then sung as a sacred corroboree :

Mirring.gandoo naditchew dapungool
Voice me sing it to me
Burrrangandoo. Yumbar garrrr
I want to hear it. Sing it (a sound)
dapinebar.
sing the song.

And then :

Bundundowar yimbarlgo naditchew
Bullroarer listen me
gooroorooorrrr yimbarlgo wumoolgoor
 listen make

girargoo.
fire.

The Australian natives were animistic in their outlook on nature. Barpoodera's totem was water (*goong*), but before he would drink it, he would address it, calling it *baboon* (father), as follows :

Naditchew woornum nyeyairgoo baboon.
Me drink thirsty father.

Similarly a man out hunting would, if he were chasing his own totemic animal, address it :

Wunmilly gnirey naditchew dagoobar.
Wait for me I eat you.

but he would not partake of any animal of his own totem, regarding it as his own flesh and blood.

The following story concerns the story of a man who went to the Bad-talla tribe to collect his great-grandfather's *dooling*, and on the way back went under a cypress pine to knock some fruit down from a breadfruit tree. It was composed by Barpoodera, but Gaiarbau records it more fully on a gramophone record :

Goolooloino wynnum illay
Cypress pine breadfruit I'm going to throw

boonbun noondi noondi dooling
hit the fruit great-grandfather
noomba ninduur.
show me your.

This corroboree song was composed to commemorate the finding of a blue flower called Yarrah, that grows on the coast. The parrot is regarded as a brother of the Batjala tribe, and if a tribal fight—a *bungoor*—is to take place, they put its feathers in their hair. The words are :

Yarrah yarrah badtalleroo boolaroo
Means two of this tribe
boorummy yarrah ninundee ninundee
picking kneel down
beerwin wumbine karngah.
parrot feather put on head.

The legend that was the source of this corroboree song was that some men of the Batjala had killed and eaten a carpet snake for food, but unfortunately for them it was the embodiment of a spirit, though they could not tell this except by the fact that it would not cook properly. In spite of this they ate it, but it started coming out of them in various parts of their bodies, and they were very ill. Other members of the tribe came up and started pulling these pieces of snake from wherever they protruded on those who had eaten it, and said to the sick men : "Why did you kill that snake, it belonged to Beiral (their god)." The words are :

Wunbaroo noongye beiraloonng wungeye
Spirit god snake
danyin meenyangoo bydin gnoopboo
eat what for kill you fellow

And this corroboree was composed by Barpoodera after seeing two men fighting, and he particularly referred to the old scars on one of them :

Goonal Naggar wambalingbar wooroo
Scars look on him of olden
bilum bungoo
times

and now, referring to the custom that prevailed in some tribes of the combatants biting a small bunch of emu feathers to make them fight better, he goes on :

Woombil gaiyah gnoopboo.

Feathers bite all of you.

The line of the same corroboree beginning *Yah dalang corannoo* has reference to the man—the culprit—who was the cause of the tribal fight and who was painted all over with ashes and had a feather placed in his hair, so that he was a marked man for the opposing side.

A dugong (*yourngun*) hunt is the subject of this corroboree.

Guneyedoo doonbeemee

A spear getting ready to throw

yourngun nyaa yunningbar.

dugong look watch for him.

and then he goes on to include the women, who on islands where there were no yams went out to dig up fern roots (*doorr*) to eat with the dugong, and to gather them from the bush.

Doorr darbimnee goolbun geerwammee.

Fern root digging nuts soaking.

Snake Bite.

The description given by Barpoodera concerning the treatment of a person bitten by a snake differs from that described as being carried out in the Doongidau horde. Firstly he stated that if a man who belonged to the Deaf Adder totem were bitten by that snake, there would be no ill effect, but if he belonged to another totem and could get into touch with a man of the deaf adder totem in time, they could save him by forming into line and holding a possum fur string which was tied on to the part affected, and pulling on it lightly and rhythmically, while they sang the proper chant. He was asked from time to time if the pain were any better. Gradually this pain would work down, and when (in case of the leg) it reached the toe, the string would come off of itself and all would be well. He assured me that he had seen people so cured.

L. P. WINTERBOTHAM.

Brisbane,

18.8.54.

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